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IN SEARCH OF SOVIET GOLD

IN SEARCH OF
SOVIET GOLD

by John D. Littlepage

AND DEMAREE BESS

HARCOURT, BRACE AND COMPANY
NEW YORK

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TO MRS. E. A. BESS

In whose California home this book was hammered out

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COLLABORATOR'S FOREWORD

JOHN D. LITTLEPAGE was taken so much for granted by the American colony in Moscow that I doubt if any of us fully realized what an important story he had to tell. We knew that he had been working since 1928 for the Soviet Gold Trust, during which time the Soviet gold industry had risen from negligible proportions to second place in world production. We suspected that he had been as much responsible as anyone else for this achievement, although we certainly never got any such idea from him. We guessed that he had seen more of the backwaters of Asiatic Russia than any other foreigner. But he said so little about his experiences that we had no idea how penetrating they had been.

Mr. Littlepage possessed an extraordinary interest for me from the moment I first glimpsed him at a reception at the American Embassy in Moscow in 1934. His six feet three inches towered above everyone else in the long, white marble room, as he stood with his back to a wall and his steady gaze swept over the crowd of tourists and Moscow's American residents. He had just returned from many months of travel in a Soviet Ford automobile over the camel trails of northern Kazakhstan and through the Altai mountains.

Someone told me who he was, and I remember that I asked him about gold mining along Russia's Asiatic

frontiers, for I was interested in this subject from an international political point of view.

"When gold is found in some undeveloped territory, far from any city or railroad, how long does it take for that district to be built up?" I inquired. "What I mean is, would a gold strike bring what we call civilization—schools, entertainment, and so forth,—more quickly or less quickly in Soviet Russia than in the United States?"

Littlepage answered the somewhat complicated question very promptly.

"When people find gold," he said with a faint smile, "they can soon get what they want, whether they live in Alaska or in Soviet Russia."

I record that answer because it throws light on Littlepage's matter-of-fact outlook on everything. Our American community in Moscow, whose members held widely diverse views on Russia and on Communism, was constantly getting bogged down in "ideological" absurdities. The Soviet Communists enveloped us all in their own atmosphere of pseudo-scientific terms, a newly invented language which confronted us hourly in the newspapers, on the radio, in the movies—everywhere. This language, like the pig-Latin which children invent for their own amusement, has proved very contagious and has spread all over the world, and it is not surprising that the foreign diplomats and newspaper correspondents in Russia caught the tune. What drew me to Littlepage from my first conversation with him was his immunity from this artificial speech.

My talks with him about Soviet industry, the position of labor, women mine workers, and so on, greatly assisted me in my correspondence for *The Christian Science Monitor*, enabling me to give a better interpretation of subjects

which otherwise might have been entangled in a maze of Bolshevik terminology. I could always count upon Littlepage to express the viewpoint of an American "producer," to use one of his favorite words to describe himself.

When the Soviet Government started a series of conspiracy trials in August, 1936, with prominent Communists as defendants, most of the foreign community in Moscow decided that Joseph Stalin and his associates had invented all the charges to which the hapless defendants confessed in open court, and had somehow forced them to admit their guilt. The trial impressed even some who actually watched the proceeding as a complete "frame-up."

Littlepage did not come to Moscow during this trial, and emerged from a long stay in the Soviet Far East only after the second trial, in January, 1937, when important Communists confessed that they had "wrecked" several Soviet industrial enterprises in order to discredit Stalin.

I asked Littlepage: "What do you think? Was the trial a frame-up or not?"

He replied: "I don't know anything about politics. But I know quite a lot about Soviet industry. And I know that a large part of Soviet industry has been deliberately wrecked, and that would hardly be possible without the help of highly placed Communists. Someone wrecked those industries, and the Communists hold all the high positions in industry. Therefore, I figure Communists helped to wreck those industries."

No theories for Littlepage. But he believed what he saw.

The more I talked with Littlepage, the more I believed he had in his possession material for one of the most valuable books which could be written about Soviet Russia. He was unique among foreigners, so far as I knew, in the

fact that he had worked intimately on close terms with Soviet organizations and at the same time had never departed, by a hair's breadth, from his original American outlook. All other foreigners in Russia had either come there as Communist sympathizers, and been accepted by the Soviet inner circle for that reason; or if they had no political bias, they were completely outside of the Soviet system. Littlepage had been inside the system for many years, and still remained as dispassionate as when he started.

He was a sort of Connecticut Yankee at King Communism's court. He watched what went on, and was not much surprised by anything he saw. These people had their own peculiar way of doing things, he said, and it wasn't his business to judge them. They had hired him to do a job of work, producing as much gold as possible for them, and he was doing it as well as he could. He got along with them very well, because he didn't mix up in their intrigues, and didn't try to stick his nose into matters which weren't connected with mining and smelting gold.

I said to him: "You are just the man to write a book about Soviet Russia. You've seen more of this system than almost anybody else, and you have always looked at it with good American curiosity, but no particular emotion."

He shook his head. "I'm not a writer," he said. "Books are out of my line. Anyway, I work for these people. I can't write about them while I am in their employ."

A fortuitous combination of circumstances made this book possible. One night in the summer of 1937 we had invited the Littlepage family to have dinner with us in our home in Moscow. Mrs. Littlepage and her two daughters arrived on time, but Littlepage himself did not appear. His

wife explained that he had been detained at the office and would come after dinner.

About eleven o'clock he arrived, and after an hour of casual talk he suddenly announced that he was through with Russia—the Littlepage family was going back to the United States for good.

We were all dumbfounded, including Mrs. Littlepage.

"I haven't had a chance to tell my wife yet," he said. "I resigned from the Gold Trust tonight and we are going home right away."

Amidst the general excited exclamations, one idea leaped into my mind.

"Now you can write your book!" I cried.

Littlepage looked annoyed. A book was the last thing he wanted to think about. But I was so sure that he had a good story, which ought to be told, that I offered to write it for him. It happened that I also was about to leave for California, on my first visit home in seven years, and we parted that midnight in Moscow with a tentative understanding to meet a month later in our own home land and talk things over.

I occupied most of that holiday at home in pumping Littlepage, learning the strange inside story which he had not felt free to reveal before. Once he had decided to talk, Littlepage proved almost loquacious—that is, for an engineer. He dredged his memory for events of the previous ten years, and sometimes his wife reminded him of effective anecdotes to adorn his tale.

Mrs. Littlepage is easily worth a book in her own right. She is as youthful in appearance and spirit as her daughters, so gentle in speech and mild in manner that no one would ever guess that she has lived in mining camps in Alaska and

Russia since she was fifteen years old. She traveled with her husband for more than 100,000 miles through the back-waters of Asiatic Russia, but I have never heard her volunteer a scrap of information about any of her astonishing journeys.

"Why did you take so many of these difficult trips?" I asked her one day. "Does the adventure compensate for the discomfort?"

"I hadn't thought about it that way," she replied. "I really go along because Jack likes my cooking."

On another occasion, I asked Mrs. Littlepage what impressions she had received of the veteran Russian revolutionary who came to Alaska in 1927 to engage her husband to work in Russia.

She smiled. "Oh, I thought he was funny! He kissed my hand, and that had never happened to me before."

This incident struck me as amusing. The first Bolshevik she had seen, and he had kissed her hand! I remembered this anecdote, and included it in a draft chapter of her husband's book.

But Littlepage's stern eye soon detected it. "Why mention that?" he asked. "You told me we were going to write about Soviet gold. Now what on earth has kissing a woman's hand got to do with Soviet gold?"

But other anecdotes fared better. Littlepage is a natural story-teller, and can spin one amusing yarn after another.

This entire book is essentially the story of Littlepage's ten years in the service of the Soviet Gold Trust, and is told in the first person. But some of the deductions and conclusions from these experiences were worked out in conversations and correspondence between Littlepage and

myself, and he has therefore requested that I also should append my signature to the book.

In helping to set down Littlepage's experiences and the conclusions drawn from them, I have endeavored to preserve the tone, if not the precise phraseology, of his unadorned, practical speech. Like many engineers, Littlepage can describe a mine with complete clarity and accuracy, but he seldom bothers to describe a person or scene. And he thinks, more often than not, in terms of production.

I once asked him: "When the Bolsheviks shipped in thousands of dispossessed small farmers to work in the mines at forced labor, how did these people act?"

Littlepage reflected a moment, and then replied: "Well, they didn't do so well at first. They had never even seen a mine before. Production fell off for about six months. But then they got the knack of their jobs, and production was soon back to normal."

That seems to be the attitude, incidentally, that many of the Bolshevik leaders maintain toward the workers in Soviet state enterprises.

John D. Littlepage's Story

I. A BOLSHEVIK VISITS ALASKA

I REMEMBER that the hunting was exceptionally good in southeastern Alaska in the early autumn of 1927. My job as superintendent of a gold mining property about 125 miles from Juneau wasn't so confining that I couldn't manage to get away for an occasional outing, and I arrived back from a successful hunting trip to find a telegram waiting for me. It came from a friend in New York, and asked me to do everything I could for a Russian professor named Alexander P. Serebrovsky. The professor, it seemed, was on his way to Alaska from the Moscow School of Mines to see how we mined gold. My friend wanted him to have a good look around, and thought I was the man to arrange it.

"Shucks!" I said to my wife. "It looks like I will have to go down to Juneau for a few days to pilot around with this Russian professor." I arranged my affairs so that I could be gone for a while, and went off in a launch to Juneau in time to meet the boat from Seattle.

The only Russians I knew at that time lived in Sitka, which had been the capital of Alaska before Russia sold it to the United States. Sitka has a Russian church, with priests in long beards and robes. In the back of my head I had a picture of this Russian professor looking something like these priests, without the robes, of course, and when I went down to meet the Seattle boat, I had an eye out for such a person.

Well, I looked over the passengers as they came off the boat but didn't see anyone resembling the man I had in mind. So I tramped back to the hotel where I had reserved him a room, to see if he had got past me. The clerk nodded as I came in: "He's up in his room." So I climbed the stairs to apologize for missing him.

When Serebrovsky opened the door, I understood why I had not recognized him on the pier. This medium-sized, inconspicuous man, smooth-shaven, with American clothes and an American air, didn't fit a single detail of the Russian professor's image I had carried in my mind. He knew a fair amount of English, which he spoke with a terrific accent, but very quietly—not much more than a whisper.

I understand that some people have premonitions of their future; but no one has ever accused me of being that sort of person. I had no feeling whatever at this time that this man's presence meant anything more to me than a chore to perform as best I could; I certainly couldn't have guessed that he was to play a major role in my life for the next ten years, and was to shift me and my family into a strange new career.

Serebrovsky turned out to be the kind of man I can do business with. He knew exactly what he wanted, and had already picked up plenty of information about gold mining in Alaska. To my surprise, he also seemed to know my own history pretty well. He explained that he wanted to see as much as he could in the briefest possible time, and was willing to spend as much money as was necessary. I suggested we could probably do best by chartering a schooner, as most of the gold mines in southeastern Alaska lie close to the water. He agreed, and we began to cover ground.

Serebrovsky quickly won my respect by his capacity for hard work. I fancied my own powers of endurance, but he never quit until I had had enough. I did a conscientious job for him, as I would have done for any foreign visitor recommended to me as he was. I showed him the Alaska-Juneau mines and smaller lode operations and dredging; I got him all the data he wanted on Alaskan operations from the Bureau of Mines and from private sources. After crowded days of inspection, he spent his nights looking into this material.

One day we stopped at Sitka, which Serebrovsky had particularly requested to be included in our tour. He showed a desire to dig up all the information he could about the Russians who had lived there before the United States bought Alaska. I took him around to the old Russian church, which I had never entered before. When the priests came out, he spoke to them in Russian, and they all engaged in a lengthy conversation which, of course, I couldn't understand. I gathered that Serebrovsky was getting from the priests all the data he could about the history of the place and the present Russian population.

The priests finally guided us through the church, and I started to walk through the place like I was going through a mine, getting well ahead of the priests who accompanied us. Serebrovsky pulled me up short, informing me that I was about to trespass on some sort of holy ground reserved for the priests. He knew the church regulations, all right, even if he was a professor in the new atheist Russia.

After we had been touring around together for some days, Serebrovsky began to sound me out about going to Russia to help the Government mine its gold. The notion came to me as a complete surprise. I had been settled here

in Alaska with my family for fourteen years, with time out for a period served in the air corps during the war. My wife's family were Alaska people, and she had lived here since she was a girl. I had begun coming to Alaska for practical experience while I was still in school, and had gotten my first real job here. Now, at the age of thirty-three, I was superintendent of a nice property, and saw no reason to complain about anything.

That is what I told Serebrovsky, but he began to argue with me in his low tones. He drew an optimistic picture of the Russian gold fields, which he assured me were among the richest in the world. He described Siberia and Kazakstan, where he said the gold fields lay, as country something like Alaska. He told me I would feel right at home there, after my years in this north country. The Soviet Government, he told me, hadn't bothered much with gold up to that time, but had now decided to pour men and machinery into the gold industry, and apply the latest methods. It was a fine chance, he hinted, for some American mining engineer to make a reputation for himself.

But he didn't get any rise out of me, even after he came out, near the end of his visit, with a direct offer and some extremely attractive terms. I simply couldn't see the sense in taking a chance on such a wild, unknown country as Russia when I was doing very well in Alaska. I knew that some Americans in the States thought that Alaska was pretty wild, and asked how we could bear to live there all the time; but Alaska was home to us, and Russia was another world.

Serebrovsky, however, seemed to have set his heart on getting me to go to Russia, and kept on pressing me with

arguments. At last, one day, I told him flatly: "I don't like the set-up of your country. I don't like the Bolsheviks who run it."

He looked a little startled. "You don't like the Bolsheviks, eh? Well, what's the matter with them?"

I retorted: "They seem to have the habit of shooting people, especially engineers."

Serebrovsky smiled, and commented in his mildest tones: "Well, I am a Bolshevik, and have been one for many, many years. Do I look so dangerous?"

I was really astonished. I don't know what I expected a Bolshevik to look like, but this mild-mannered, professorial-looking fellow didn't fill the bill. My knowledge of Soviet Russia at that period was practically nil; I had glanced through newspaper and magazine articles, but it seemed such a confused sort of place that I gave up reading about it. My notions of Bolsheviks were extremely vague; but I had a distinct impression they were a bloodthirsty crew, and began to watch my Russian professor more closely after he had disclosed himself.

I suppose it was this watchfulness on my part which makes one incident stick in my mind. An engineer who was showing us through a gold mine warned Serebrovsky to keep clear of the chutes. His manner, which had always been so mild during the days I had known him, suddenly changed. He flared up like a Roman candle, and asked me in low, intense tones to inform our guide that he was a mining engineer himself and knew perfectly well how to look after himself in a mine. He seemed all of a sudden an entirely different person, a man with immense authority who was accustomed to being treated with deep respect.

Another incident comes to mind which struck me at the

time as surprising. I had made an appointment for Serebrovsky with the general superintendent of the Alaska-Juneau mines, one of the largest gold mining properties in the world. We got there about lunchtime, and met the superintendent coming out of a tunnel in his working clothes, with plenty of muck sticking to them.

As I introduced him to Serebrovsky, the latter looked bewildered. He asked me on the side: "You mean this man is the general superintendent?" I replied: "None other."

The three of us went on into the company boarding-house to have a meal. We sat down at one of the long tables, upon which food had been piled, and helped ourselves to what we wanted. Of course none of the tables was reserved for anybody, and we found ourselves at a table with a lot of ordinary miners, who listened to our conversation and occasionally joined in.

That incident made a great impression on Serebrovsky; he talked about it to me at some length. He couldn't get over the fact that the general superintendent had sat down to eat with his own miners, without even thinking about it.

I couldn't see anything impressive in that. I told him there was no class distinction between officials and men in Alaska. "Isn't it the same way in Russia?" I asked. "I thought everybody was equal over there."

Serebrovsky looked at me a little queerly. "It's not that way yet," he said. Then he added: "But it will be, some time before long."

After that, he seemed more anxious than ever to have me go back with him. He would talk for hours about the beauties of the virgin country in Siberia and other eastern

parts of Russia. "Your Alaska is beautiful," he said. "But it is nothing compared with our mining country. And the pioneering job is finished here. There isn't much opportunity for a man to excel any more in Alaska. But in Russia we are just beginning, and a man like you would have work worthy of his talents."

His eloquent manner began to get me in spite of myself. I finally fell back on my family as a counter-argument. I told him I had a wife and two small daughters and was very much of a family man. I couldn't very well take them with me into a country like Russia, and I didn't intend to leave them in America for years at a time, as I would have to do.

Serebrovsky quickly squelched that idea. "Of course, you can bring your family to Russia with you," he said. "We will give them the best of everything. First-class passage on the best steamers from Alaska to Russia for all of you. The best quarters wherever you go. A living allowance sufficient to support you and your family in Russia, in addition to your salary in American dollars."

When I still held back, he insisted on returning with me to see the property where I was superintendent. He met my wife and daughters, and talked up Russia to them. If my wife had opposed the idea, the matter probably would have been settled there and then. But she seemed to be rather intrigued by the notion of such an adventure. And the prospect of making and saving a lot of money naturally had its appeal to both of us.

But we couldn't be rushed into making up our minds before he left. He went off, and his last word was that we would soon hear from him again. Not long afterward, I received a cablegram from his office in Moscow, asking

me to go on to New York and arrange a contract with Amtorg, the Soviet organization for buying and selling things in America, including the purchase of engineers' services. At the same time, Serebrovsky cabled me the money to go to New York, and included an additional sum sufficient to pay my way back to Alaska again if I wasn't satisfied with the contract they offered me.

With my expenses to New York assured in any case, there seemed no point in refusing this offer. On February 22, 1928, the four of us set out from Alaska, which was more home to us than any other part of the world. We still had no clear idea of what we intended to do; I was so uncertain about going to Russia that I left the family on the west coast while I went on to New York to talk things over.

When I reached New York, I found that the terms of my contract were as satisfactory as I had been led to believe. But at Amtorg I had my first encounter with Soviet red tape; there were so many documents to fill out and so many papers to be signed by petty officials that it was a full month before the matter could be settled. Meanwhile, however, I had instructed the family to join me in New York, and in March we set out across the Atlantic for Russia, considerably flustered, as may be imagined.

My contract ran for two years, and that seemed a long enough time for me; certainly I would not have signed for a longer period. None of us then had the slightest intimation that we would spend a full ten years of our lives on this job; that we would run up against all kinds of adventurous situations such as had never entered our heads. I suppose if we had known what lay ahead of us, we would have turned back, contract or no contract.

But life isn't organized that way; otherwise, it would be hard to get things done. We sailed off cheerfully enough, and the worst of our worries on that trip was seasickness. We had bought a few books about Russia to read on the way over; but the pitching of our ship kept us all to our berths, in no more mood to take instruction than food. We were going to Soviet Russia just about as ignorant of that country and its peculiar ideas and habits as any four people well could be.

II. MOSCOW'S CHILLY WELCOME

OUR tickets had been bought to Cherbourg, but while our steamer was in mid-ocean a bell-hop knocked at my stateroom door one day, and presented me with a wireless message from Serebrovsky in London. My Russian professor said that he wanted me to stop off in London to help him with a report about mining technique in the United States. So we dropped off at an English port, and traveled up to London.

When I looked over that report, I was more impressed than ever with the tremendous working capacity of this Russian. He had spent only a few months in the United States, and had kept going every day most of the time he was there. Yet he had found time to write a very large book, thoroughly illustrated, describing the most up-to-date gold mining methods used in our country. He was preparing this book for publication in the Russian language, and wanted me to check over his facts before he let it go. I didn't find much to change in his description.

Having finished this chore, I gathered the family and headed on for Berlin, where I had been told by an American friend I would meet several engineers, both American and German, who had worked in Russia and could give me some tips. At that time, the co-operation between Russia and Germany was very strong; the Russians had hired hundreds of German experts to help them set up their industrial enterprises and were buying all sorts of materials in

Germany for new factories and industries and transportation lines. The arrangement worked out very well for both countries, and I am sure many Germans were disappointed—and some Russians, too—when Hitler's rise to power broke up these relations.

The engineers in Berlin were very friendly, and tried to be helpful. They warned me that the traditions surrounding engineers in Russia were entirely different from those in the United States or most other countries. Engineers in Russia, they said, never went down into the mines or into the metal mills in their digging clothes, as engineers do in the United States. They assured me that I could not get far unless I observed the customs of the country; I must keep well-dressed, wear gloves when I went into the mines, and when I had any orders to give, I should write them out in my offices and send them by messenger to the persons concerned.

I listened to all this with considerable misgiving; I couldn't picture myself acting in any such manner. Ever since I was a school kid working in summer for practice in the mines, I had worked alongside the men, wearing the same kind of clothes and often doing the same kind of work they did. I didn't see how an engineer could do his work properly if he stood around in dress-up clothes, wearing gloves, and not supervising the work.

In Berlin, I learned for the first time that my sponsor, Serebrovsky, was a great deal more important in Russia than I had suspected. I was told he was one of the most powerful industrialists in the country, who had held many big jobs and had as much influence as anyone. He was the big boss in my own field of gold mining, I was told.

In those days there were also many Russians in Berlin;

some of them émigrés and others Soviet officials on business trips. Quite a number of the émigrés had figured out a neat racket for themselves. They would keep a close lookout in the Soviet newspapers for news about purchasing groups coming to Berlin from Moscow. When they got wind of some group which was soon due, they would go around interviewing German concerns. They would tell the Germans that they had some close friends among the Russians on the commission, and could influence them to throw their purchases to this concern if it was made worth their while. The Germans would then offer them a percentage in case they secured the business.

More often than not, the émigrés didn't know any of the Russians in the purchasing groups, and had no influence even if they did happen to know one or two. But by the law of averages the Soviet purchasers would buy a certain amount of goods from the concerns approached, and the émigrés would thus make a fairly good living without taking any risks, or putting up any capital, or coming through with any services.

One of the Soviet Russians then in Berlin took a liking to me, and kept trying to give me some kind of advice, although he could speak very little English. Finally, he got hold of an interpreter he trusted, and spent an evening describing the Soviet police system, which was strongly established, and necessary under the circumstances existing in Russia. He said I needn't get worried if Russians working with me suddenly disappeared under what would seem to me to be mysterious circumstances. There wasn't any other way to manage things at present, he told me, and I would find the police active in the mines and the mills. He told me I should take it that the police were helping

rather than hindering my work, and not be bothered by them.

He meant to do me a good turn, but he had me pretty worried before he was through. The picture he drew of police watching all the time in the mines was not reassuring to me. I wasn't used to working under such conditions, and didn't relish doing so now. And I didn't understand why it should be necessary to keep watching the workers in mines and mills.

We spent a number of days in Berlin, which was an active, gay sort of city in 1928, and we had a good time. The people I met were all interested in my going to Russia, and their talk about that country was instructive. Serebrovsky met us in Berlin, and said we could go along with him on the long train-trek across Poland and Russia to Moscow.

London and Berlin had seemed to be our kind of civilization; but when we got into Poland, all four of us began to grow uneasy. Our train crossed the German-Polish frontier in the middle of the night, and we were waked up by a big soldier who burst into our compartment and stuck an army rifle through the door at us. My little girls were scared stiff, and I wasn't any too comfortable myself. About the time we thought he was getting ready to shoot, a second uniformed man appeared and politely asked us for our passports. He exchanged a few words in his own language with the soldier, and curled back his lips in a sort of sneer when he saw by our visas that we were bound for Russia. We judged from his manner that this Pole was displeased to see foreigners going in to help the Russians.

This incident broke up our sleep, and our spirits were not quickened when we looked out the next morning at

the flat Polish country, still covered with deep snow, although it was now April. It was bitterly cold outside, and the train was not very well heated. Conditions were no better when we crossed the eastern Polish border and changed to the Russian train. The country was just as flat and uninteresting, and the train was even colder.

I looked around for Serebrovsky after the Russian train had set off from the border station, and couldn't locate him at first, but finally traced him to the dining car. He was wearing the happiest expression I had ever seen on his face, and in front of him had a pile of coarse black bread and two glasses of tea. He invited me to share this food with him, assuring me that one couldn't get such bread anywhere else in the world except Russia. When I tasted it, I decided no one except a Russian would care to eat it. In later years, however, I got so I too liked the Russian black bread, and I missed it when I left the country.

Our little family was none too happy as we pulled into Moscow. The Polish and Russian countryside and trains had made us feel we might have made a mistake in agreeing to spend two years in such surroundings. And Moscow gave us a chilly welcome. A few friends, wrapped to the eyes in furs, came down to the station to meet Serebrovsky, and there was a great deal of embracing and greeting. In the excitement of this reunion, Serebrovsky forgot all about our existence, and walked off down the long platform with his friends. We finally got hold of some porters and collected our baggage, but we reached the station entrance just in time to see Serebrovsky riding off in a big limousine.

I was too innocent of Russian conditions to be worried at this point. But we had anticipated no such weather;

the girls were dressed in light clothes and short socks and there was no heat in the station. I told them to wait a moment until I could find a taxicab, not realizing that taxis were practically nonexistent in the Moscow of 1928. At that moment, in fact, I began the hunt for a conveyance to take me somewhere, which never really ended for ten years, until I climbed on the train from Moscow to take me out of Russia for good in the summer of 1937.

A few one-horse sleighs stood near the station, with drivers almost hidden from view behind fur robes. I didn't know a word of Russian and they didn't know a word of any other language, and didn't seem to show any curiosity whatever in what I was trying to tell them. I rushed around that station for two solid hours, getting madder every minute, while my wife and daughters shivered miserably inside the station. Finally, a little man appeared with "Guide" written on his cap, and he responded to English. We were soon on our way in a couple of those Russian sleighs to a hotel where we stayed during the ensuing month in Moscow.

I have watched hundreds of American engineers come into Russia since that day, and have suffered with them. Those early days, when everyone is speaking a completely unfamiliar language, when the food and the customs and the stores are unlike anything seen before, are not easy to endure. We were taken to a hotel which today is used for foreign tourists, and whose staff speaks several languages. But in 1928 it was used only for Russians, and nobody around the place spoke any English. We located the dining room on the third floor by following our noses, but for several days we couldn't order our meals until somebody else was served and we could point to their food. It was

thus soon impressed upon me that I couldn't get very far with my work in this country until I learned something of their language.

The day after our arrival was the beginning of Russian Easter week. All the hundreds of churches in Moscow kept up an almost continuous ringing of their bells, day and night, for five or six days. To our ears, the bells had a jarring unfamiliar sound, and kept us awake. We had no idea then that this was the last Russian Easter which would be celebrated in any big way; soon after this, the authorities began to dismantle most of the churches, and forbade those which remained to ring their bells. Today one never hears a church bell ringing in Soviet Russia. In those days Russians were extremely friendly and hospitable to foreigners, as they would be today if they were permitted to be. Several Russians we had just met invited us to visit their homes and have some of the cakes and cheese especially made for Easter.

I spent my first month in Russia getting acquainted with the organization of the central offices of the newly-created Gold Trust for which I was to work. I also worked on a commission which had been set up to list standard equipment for use in mines and mills, and to get out designs for some of the smaller equipment which could be manufactured at once in Soviet factories. I was impressed with the fact that plans were being made to expand the gold industry on a gigantic scale and that plenty of funds seemed to be available.

The great Soviet spring holiday, May 1, came along during this first month in Moscow. I must admit that my political education had been sadly neglected; I wasn't even aware that May 1 was a holiday. This is the International

Labor Day in Europe, but it was never celebrated in the mines of Alaska where I had spent most of my working life. My office had not yet been able to find an English-speaking interpreter for me, and I had to get along as best I could in broken German with the help of a Russian official who spoke German. As we were about to close down work on the afternoon of April 30, this gentleman invited me to come to the office at nine o'clock the next morning, and I gathered that something special was on.

Well, I arrived at the office with plenty of time to spare, and a smiling Russian girl pinned a ribbon on my coat-lapel, whereupon my German-speaking associate took my arm and marched me out to the street where the rest of the staff had assembled and were forming in line. I had no idea what it was all about, but was carried along with the rest. On the way, we were joined from time to time by other groups, and finally reached a circular street intersection in a part of the city which was totally unfamiliar to me. This seemed to be our destination for the time being, and we stood around and waited.

After about an hour, my German-speaking guide informed me that he had to go off for a few moments on some urgent business, and left me alone with the rest of the group, who spoke nothing but Russian. I didn't suspect at the time that he was running out on me, but that's what he was doing, and he never showed up again that day. The weather was bitter cold, and I wasn't dressed warmly enough to stand around comfortably. And we moved along very slowly, since the streets were packed with people lined up like ourselves.

I was put into that parade at nine o'clock in the morning, and I marched or stood waiting in line without being

able to talk to a soul until five o'clock in the afternoon. The Russians all seemed to be used to it; they had apparently come prepared for a long ordeal and amused themselves as best they could with songs and dances to keep warm. But I didn't bear up so well. I would have ducked out if I had known where I was or could have asked somebody how to get back to my hotel. But I didn't even know the direction to take.

Along about five o'clock, I caught sight of a familiar building in the center of town. I knew my hotel was not far off. Without looking to right or left, I marched straight out of the file and made a bee line for my hotel, where I occupied myself agreeably with food and drink.

I learned later that these May 1st parades are one of the great sights of the world. I have watched one or two, and been favorably impressed. But my first view might be described as a worm's-eye view. I was a piece of a parade and didn't exactly know it. If I had stayed in line about five minutes more, I would have reached Red Square, which was the ultimate destination of all the groups, and paraded past Stalin and the other high Russian officials on the reviewing stand.

During my study of the organization for which I was to work, I learned that the Gold Trust was in process of being shifted from one government department to another, and that the central government was taking over operation of mines which had hitherto been under the nominal control of district governments. But since there was a shortage—almost an absence—of experienced operators and engineers, and of equipment as well, the organization was being broken up into a series of district trusts, each directly re-

sponsible to the central trust in Moscow. It was thus possible to distribute available resources more readily.

Through this month of study, I began to get my first hazy idea that all industry, like almost everything else in Russia, was controlled by politicians. It was explained to me that the central trust and all the district trusts and every group of mines were in joint charge of a non-technical manager and a chief engineer. The former was a politician, a member of the Communist Party, and the latter was nominally the general superintendent in charge of operations. But the functions of these two executives overlapped, and, I was later to discover, as soon as the politicians became better acquainted with gold production, they would gradually take over control of everything. However, the chief engineers were made deputies to the managers, so that in case either one was absent, the other would perform the functions of both.

This political control, I saw from the beginning, was extended right through the organization from top to bottom. At the head of all such departments of the Trust as mining, milling, transport, projecting, bookkeeping and supply, stood two executives, one of whom was a Communist and the other a technical expert. The latter was obviously second-string, and the politician had the final say.

That first month in Moscow was probably my toughest period in Russia. I was anxious to get my teeth into an assignment, and this one eluded me. I had trouble at first finding any sort of interpreter, and even after I had one the peculiar organization of the Soviet mining industry wasn't easy to understand. I had never run up against anything like it.

But things really moved fast for me, according to the

Russian standards of time which later became familiar. About the middle of May I was informed that I had been appointed chief engineer for a group of gold mines being developed at Kochkar, in the southern Ural mountains in western Siberia. I immediately did what I would have done in Alaska or anywhere else; asked for plans of the mines, production figures, and cost sheets, so that I could estimate whether they were worth working.

I asked a young German economist who was working in the office to get me this material. He was a very earnest Communist who had come to throw in his lot with the Bolsheviks. He told me: "Under our system, you don't need to worry about costs. If production costs are high in one mine, they are balanced by low costs in another."

Such talk simply didn't make sense to me, but I was in no position or mood to argue the point. I gathered up my family, and we climbed on to a Russian train again, this time for the long ride from Moscow to the Urals.

III. SOCIALIST GOLD

DURING my first days in Russia, I was too busy to give much thought to the reasons why Russian gold mines and deposits had been so completely neglected up to that time. I suppose I took it for granted that revolution and civil war had been responsible, although I did have a vague idea that civil war had ended years previously. I had to live and work in Russia for years before I managed to piece together all the reasons for this neglect, but I don't see why the reader needs to wait as long as I did for this information, since it will help him to understand my Russian experiences better than I did myself at the time.

Being an American, it never entered my head that anyone who discovered gold in the ground should not want to get it out. So it seemed normal enough to me that the Bolshevik Government should want to mine its gold, and should therefore hire me for the purpose of helping it do so. But I was told, some years after I had come to Russia, that the decision to revive gold mining on a big scale was taken only after a lengthy dispute among powerful Communist leaders, and that some of the Communist chiefs were not at all satisfied with the final decision to go after gold.

It seems that the inventors of communism, including Karl Marx and Lenin, had held to the opinion that gold would lose most of its value under a collectivist system, and one or another of them had once made the sarcastic

remark that gold would be useful under socialism only for filling teeth, and might as well be used for making sanitary fixtures as for anything else.

Most Communists, I learned later, were disposed to take any utterance of these founders of their system as the gospel truth, and therefore didn't pay any attention for a whole decade after the Revolution to the large deposits of gold scattered all over Russia.

Before the World War, Russia had a very sizable gold production, of which by far the largest share came from placer operations. A fleet of small dredges had operated in the Urals, in western Siberia, along the Yenisei River and in the Far East. But the balance was dug out by a horde of hand-miners, or prospectors, scattered all over the Ural and Altai Mountains, throughout western Siberia and around and along Lake Baikal and the Yenisei, Lena, and Amur Rivers in the Far East.

As for lode mines, a few were being operated in pre-war Russia in the Urals, western Siberia, and Kazakstan, and some lode prospecting was being carried on in the Amur River district on the Manchurian border. Almost without exception, these mines had been operated by antiquated methods and with primitive equipment. As an almost universal rule, the gold ore was mined by hand, put through Chilean mills, and then amalgamated. Most of the mines could be worked only to the water level for lack of pumps, and only the higher grades of ore were mined on account of incomplete recovery of the gold.

This primitive industry was practically lost to sight during the World War and the civil conflicts which, in Russia, followed that war. During the eight-year period between 1914 and 1922, gold production in Russian terri-

tory ceased almost entirely. With only one or two exceptions, the dredges and lode mines were shut down, shafts were permitted to flood, and in many cases head-frames, buildings, and mining and milling equipment were totally destroyed. Practically the only gold miners left in the country were a few placer miners who did all their work with a pick and shovel, or with the aid of a horse-operated hoist.

Between the years 1922 and 1927, in the period before my coming to Russia, there had been some small increase in gold production, entirely sporadic in character, and due for the most part to small placer operations and rehabilitation of some of the smaller lode mines, by collecting enough equipment from several mines to operate one mine in "haywire fashion," as the mining slang goes. The only persons interested in this process were individual lessees, and they saved only that part of the gold which could be recovered by the use of mercury.

Theoretically, the Government itself owned all gold, as it did all minerals, as well as all lands and forests in Russia. The Government was trying hard to mine its other minerals, such as iron, copper, zinc, and the like, because these were recognized as useful under socialism. But the central Government hadn't paid any attention whatever to gold, and the lessees who operated a few scattered mines made their arrangements with local governments, which themselves lacked both the financial resources and the qualified men to equip and operate gold mines. The central Government was so little interested in gold that it made no serious attempt to prevent the gold smuggling which was proceeding on a considerable scale at this time across Russia's southern borders.

At this point, in the summer of 1927, Joseph Stalin comes into the picture. It seems he wasn't so much disposed as some of the other Communists to accept as eternal truth the pronouncements of Karl Marx and Lenin about gold. In some way, not publicly explained, he became interested in the subject of the 1849 gold rush in California, and began to read every book he could get on the subject. Among others, he read *Sutter's Gold*, written a year or so previously by a French writer named Blaise Cendrars, a book which draws a vivid picture of the gold rush. He also read most of the writings of Bret Harte, and a history of California during and after the period of the gold rush by T. E. Rickard.

At this time, in 1927, Stalin and the other Communists were probably beginning to get worried about the Japanese menace to Russia's Far Eastern possessions. The Sino-Soviet revolution in China hadn't turned out so well for the Communists, and had aroused a good deal of hard feeling against the Russians among westerners as well as Japanese. The Far Eastern territory of Russia was so sparsely settled at that time that it would be very difficult to defend; it provided inadequate communications and supplies for an army of any size. It was natural that Stalin should turn over in his mind various means to make this territory more secure. And the California gold rush gave him a clue.

The facts in the above paragraphs are a little conjectural, but are confirmed in general by a book published in 1936 by Serebrovsky. This book gave me my first real understanding of the circumstances under which I was brought to Russia. The book, entitled *On the Gold Front*, and published only in the Russian language, was with-

drawn from circulation very shortly after it appeared because some of the men mentioned in it were later discovered to be conspirators. I possess one of the few surviving copies of this valuable book.

Serebrovsky's book makes it clear that Stalin's imagination was fired by reading about the California of 1849. He was fascinated to observe how rapidly the western regions of the United States had been filled up after gold was discovered in California, and saw that the process had been largely accomplished by the incentive of getting rich quick.

We can imagine Stalin's predicament as a Communist. The desire to get rich in a hurry is decidedly individualist and capitalist; it hardly seemed proper for a socialist government to encourage it. At this time, too, Stalin was engaged in a struggle for power with other influential Communist leaders, who accused him of sidetracking the Revolution.

On the other hand, here was a huge region, sparsely settled and therefore all the more vulnerable to attack, which might be filled up with abnormal rapidity, as the western regions of the United States had been after 1849, if only a gold rush were started. And Stalin knew that there was plenty of gold lying about in the Soviet Far East, almost completely neglected by its theoretical owner, the Soviet Government.

It is not made clear in Serebrovsky's book whether or not Stalin put up this idea to other high Communists, particularly to those of opposition groups; for at that time, opposition factions were still permitted to exist among the Communists in Russia. Stalin probably knew that in any case he would have to wage a lengthy theoretical battle

with those who would point to the pronouncements of Marx and Lenin about gold under socialism.

How the matter was decided in the first place, we don't know. Serebrovsky's book begins at the point where Stalin summoned him to Moscow in the summer of 1927, and told him that he had been selected to supervise the creation of a Soviet gold industry. This was no casual decision, and meant a good deal more to Communist theoreticians than was understood at the time, or has been generally understood since.

Serebrovsky was already a big man among the Bolsheviks. He had been chief of the Soviet oil industry since 1920. He was one of the little group of hardbitten Old Bolsheviks whose energy and cold determination put over the Revolution in the first place, and then accomplished the far more difficult task of setting up the great state corporations in Russia and keeping them going. Serebrovsky was one of the few pre-Revolutionary members of the Bolshevik Party who was trained as an engineer, so that he has been especially valuable to the Government ever since it was founded. That he should select Serebrovsky for the job of creating it showed how much importance Stalin attached to the new gold industry.

In his book, Serebrovsky explains that he knew nothing about gold mining at the time Stalin summoned him. On one occasion or another, he had run across gold mines in Siberia, he wrote, but had never really understood how gold was mined. He explained this state of affairs to Stalin, who passed it over as of no consequence and proceeded to explain to Serebrovsky why it was necessary at this time to create a Soviet gold industry.

Stalin cited as a parallel the role played by gold in

strengthening the economy of the United States. He pointed out that the gold mined in the American west had become within a few years a major factor in the American Civil War, providing a gold chest which made it easier for the North to defeat the South. Meanwhile, said Stalin, the discovery of gold had opened up agriculture and industry in the whole western part of the United States.

"Stalin showed an intimate acquaintance with the writings of Bret Harte," wrote Serebrovsky. "Without going into technical details, he said that the new districts of the United States were opened up from the beginning by gold and nothing else. On the tracks of the gold hunters came other mining industries, zinc, lead, copper, and other metals. At the same time, agriculture was opened because it was necessary to feed the gold hunters. Roads and transportation developed for their benefit."

Having thus summarized the history of California's gold rush, Stalin told Serebrovsky: "This process, which really made up the history of California, must be applied to our outlying regions in Russia. At the beginning, we will mine gold, then gradually change over to the mining and working of other minerals, coal, iron, etc. At the same time we will open up agriculture."

Resuming his analysis of the California gold rush, Stalin informed Serebrovsky that in the beginning California placer-gold was mined by prospectors and hand labor, under conditions vividly described by Bret Harte. He added: "These prospectors must play a large part with us, too."

This statement is very significant. At that time, in 1927, individual prospectors were still roaming about in the gold fields, simply because the Communists had not both-

ered with gold. The big Communists were planning at that moment, however, to outlaw all individual operators, whether they were farmers or small city traders or artisans. But Stalin, it appears, was planning even then to use individual gold prospectors. In later years, as we shall see, he had to dispute with other Communist leaders on this question, and won out only after temporary surrender.

Stalin then said to Serebrovsky: "And now you must go to America and learn in California and Alaska the history of gold mining, and then visit the best mines of California, Colorado, Alaska, and other places in order to make a study of the industry."

But Stalin asked him to come back for another talk before he set out for America, and this time the discussion was limited to the part Russians had played in colonizing Alaska and California, a subject which seemed to interest Stalin greatly. He asked Serebrovsky to look up all the books and documents he could find which outlined the history of Russian colonization of northern California, and recommended that he study the revolution of 1848, when the small Russian colony, assisted by Russian religious refugees, started the Republic of California, which managed to obtain independence of Spain and was finally absorbed by the United States.

Serebrovsky did not come to the United States as a total stranger; he had visited our country once before as the chief of the Soviet oil industry. But in 1927 he was engaged on a different mission, and decided merely to represent himself as a professor in the Moscow School of Mines, touring the United States to study mining technique. It was in this role that he came to Alaska, and that is the only role I had seen him in until I arrived in Berlin.

At that time, it was difficult for a Soviet citizen to obtain an American visa; we had no consulate or embassy in Russia. But Serebrovsky had powerful American friends. He telegraphed to executives of the Standard Oil Company, who knew him in his capacity of director of Soviet oil, and asked their help in getting a visa from our Paris embassy. When he arrived in Paris, executives of the Standard Oil offered him every possible assistance, and the American Ambassador received him cordially and instructed the consulate to issue a visa for him without delay.

So this was the man who had become my sponsor in Russia, and who came in with our family on the train from Berlin to Moscow. At the time, I thought it rather queer that I saw so little of Serebrovsky during those early days; we had been together much of the time in Alaska, but in Moscow I was seemingly forgotten. When I read Serebrovsky's book in 1936, the reasons for my "neglect" became clearer.

Serebrovsky had to report at once to Stalin. He had accumulated a mass of information about American mining technique, how Americans build mills and mining towns. Stalin said he was pleased with this technical information, and asked Serebrovsky to expand it in several places and publish it as a book for a sort of control or plan for the gold industry. But he added that he wasn't yet satisfied with Serebrovsky's knowledge of organization of supplies and of the connection between the mining business and financiers and bankers. Apparently Serebrovsky hadn't considered this so important, but Stalin recognized its importance in Soviet Russia as well as America.

After he had looked over all the maps, documents, and

materials which Serebrovsky had brought back from America, Stalin said: "Now we know how the gold industry is worked in America, and what parts of American industrial methods we must adapt to our special conditions."

He then instructed Serebrovsky to leave Moscow as quickly as he could, so that he could get acquainted with different staffs and in time visit every gold mine in the Soviet Union. Stalin told Serebrovsky: "You must get acquainted not only with the character of the work, but with every worker in the industry. Find out what these people's difficulties are, their weaknesses, and there, on the spot, help and direct them, and arrange to back them up. . . . The most important thing is not just to visit the mines, look around, talk to people, and leave. That's not the thing. You must go out there and carefully, without consideration for time, speak with every manager, engineer, bookkeeper, and workman, find out how they live and how they work. You must do it in such a way that when you come away, every worker will say when you leave that Serebrovsky has been here and has given us such and such concrete instructions and help."

Those are Stalin's words, as reported by Serebrovsky. They certainly sound to Americans like a father lecturing his son or a teacher his immature pupil. At any rate, Stalin was handing out a rather tall order to the chief executive of a brand-new corporation which was intended soon to employ hundreds of thousands of men and women scattered over provinces with an area at least as large as the United States. After reading this, I wasn't surprised that I didn't see anything of Serebrovsky for months at a time during my early years in the Soviet Union!

So these were some facts which were unknown to me when I started my own work with the Soviet Gold Trust in the spring of 1928. I don't suppose it would have done me any particular good if I had known them. I had been hired to install American mining methods in the Soviet gold mining industry, which was just being created, and to get production as quickly as possible. It wouldn't have made much difference to me at that time if I had been told I had been engaged by an industry which was one of Stalin's pets, and which had been the subject for a bitter dispute among Communist leaders. As a matter of fact, I don't believe I had any idea at that time that Stalin himself was a very important man!

IV. SIBERIA BECOMES OUR HOME

WE felt more at ease as we set out from Moscow, headed for my first real assignment in Russia, because an English-speaking interpreter had finally been dug up for me, and he came along with us. I had never before depended on an interpreter to make myself understood, but was glad enough to have one at this time. We were heading for Sverdlovsk, the capital city of the Ural Mountain district, where we had to change trains, and where we had been assured a representative from the mines would meet us.

Sverdlovsk is named after a prominent Bolshevik leader who died some years ago; the city formerly bore the name of Ekaterinburg, after Catherine the Great. One day in 1918 it was the scene of the murder of Tsar Nicholas II and his family. It was a rather drab Russian provincial town when we first saw it in 1928, but was already showing signs of the immense construction and industrial activity which was to alter its appearance in the next few years.

I had been told that the man sent from the Kochkar mines to meet me could speak English, but when he met us at the train I discovered he couldn't speak a word of English or any other language I knew. He was a Hungarian Communist, one of the flock of followers of the Hungarian Communist leader Bela Kun, who came into Russia after the collapse of the Bolshevik régime they managed to set up in Hungary for a short time after the

war. He seemed to me to be a rather unpleasant individual and I didn't care for his looks. I cared for him even less as the days passed and he kept insisting, on one pretext or another, that we couldn't start out for the mines. On one day he said the roads were impassable and on the next he reported a bridge had been wiped out.

We had been put up in a hotel at Sverdlovsk which was considerably less agreeable than the one in Moscow and just as expensive; and in this case, I was paying through the nose for myself and the family. So I became more and more impatient at the long delay, and finally told the Hungarian that if we didn't leave within twenty-four hours I would return to Moscow. That seemed to settle matters, and he said we could start off; I paid the big hotel bill for the twelve days we had stayed there, glad at least to get going.

Not until two years later, in a conversation with the assistant manager of the Kochkar mines, did I learn that this Hungarian had deliberately held us up in Sverdlovsk so that he could amuse himself with whatever night life the town afforded. There was no reason at all why we couldn't have started off for the mines from Sverdlovsk the same day we arrived there from Moscow. This man had been instructed to bring us along as soon as we wanted to come, and meanwhile had been provided with funds to pay our hotel bills. He had been assigned to this job in the first place because he pretended to speak English. He wired every day to the mines, saying that we were busy shopping and didn't want to start yet. Meanwhile, he spent the money given him for our hotel bills on himself, and had a good time in general at our expense.

In 1937, about the time I was preparing to leave

Russia for good, the Soviet newspapers reported the arrest of Bela Kun and many of his Hungarian Communist followers. If they were all like this fellow, I am surprised something of the sort didn't happen to them sooner. But many of the Russians are rather simple-minded, and foreigners could easily dupe them if they wished. There were other foreigners in Russia at that time as tricky as this Hungarian. They helped to spoil the natural friendliness of the Russians toward foreigners.

This experience made us all the more ready to appreciate the hearty reception given to us when we arrived at the mines. The train trip from Sverdlovsk to the south ran through pretty country; it was springtime in western Siberia, where spring is just as welcome and as beautiful as in Alaska. The wild flowers were out in large numbers on the steppes, and spread out like some richly colored carpet over the level ground.

The people at the mines were as kind and friendly as any we had known anywhere. We were conducted to an enormous seventeen-room log house, standing off in its own park, which had been built for the manager of a French mining concession before the war, and had all the conveniences we could desire. We were told we could have this house to ourselves, although it wasn't possible for us to furnish, heat, or use more than five of the rooms. There was a great glass-enclosed sun porch, facing on the remains of an extensive garden.

The natural hospitality of the Russians had not been warped at that time by spy manias and organized campaigns to arouse suspicion against all foreigners. We had hardly taken a look around our new mansion before horse-drawn carriages arrived, and we were rushed over to the

commodious house of the Communist manager of the mines, who had arranged a dinner in the sumptuous Russian style for us, and had invited most of the engineers and sub-managers of the mines and their families to meet us. This was only the beginning of a round of dinner parties which continued for more than a week. We couldn't speak any common language with most of these good people, and our interpreters had a busy time; my wife had acquired an interpreter of her own in Sverdlovsk, who was supposed to help her run our mansion. But there was so much good feeling all around that we didn't miss the absence of a common language so much as we would have supposed.

The life at Kochkar in the summer of 1928 didn't seem unlike the life we had lived in Alaska. It was very different from the kind of existence in such places in Russia today. My young daughters made friends with some Russian children, and soon picked up some of the language; my wife and I both began to study Russian in our spare time. We had plenty of occasion to use Russian, since we were the only foreigners in Kochkar, and didn't see another foreigner for the next eighteen months. But the people were so friendly and the life so pleasant that we enjoyed ourselves.

I was assigned a carriage to take me to and from the mines and my house; the driver who came along with the carriage was a tall, ungainly creature who slouched around dressed in a garment which probably had once been the overcoat of some Russian nobleman's coachman. The horse was even more ungainly than the driver, but nevertheless bore the imposing name of "Intelligentsia." At that time the Communists were lambasting the intellectual class in

Russia for alleged sabotage of the Bolshevik system. My driver, being a strong Communist sympathizer, had named the horse "Intelligentsia" so as to take out dislike of a class of people on the unfortunate animal. In a croaking voice my driver would shout the name "Intelligentsia" with all possible dislike; then down would come the whip on the back of this symbol of the alleged traitorous class.

I took it for granted that this strange creature was a man, and it was some time before I discovered to my astonishment that my driver was a woman, and rather a young one, at that.

The managers and officials at Kochkar had servants, even to a greater extent than the same class of people might have in any other country. These are necessary on account of the rather primitive methods of housekeeping. Our first servant was a red-cheeked peasant girl, very pretty and good-natured. One day not very long after our arrival, she announced to my wife that she was getting married. My wife showed suitable interest, and asked her how long she had known the prospective bridegroom.

"Oh, I don't know him at all," the little girl replied. "I've only seen him once."

My wife expressed surprise, and asked how that had happened. The girl explained that a young miner had caught sight of her when she went to the market to buy our daily supplies, and had inquired where she came from. On the next Sunday, he had traveled to her village, looked up her father, and asked permission to marry the daughter. The whole matter had been arranged without the girl knowing anything about it.

"But do you like that?" asked my wife.

"Oh, it's all right," replied the little girl in a matter-of-

fact tone. "My father told me to marry him, and he seems to be a nice young man." The state of feminism in Soviet Russia wasn't very highly developed in such people, even though eleven years had passed since the Revolution. And I must say, that marriage turned out pretty well.

In our first year in Russia, the tempo was much slower than it became later, and is now. The mines at Kochkar were closed on Sundays, and everybody took the day off; the idea of continuous production hadn't caught on anywhere. The nearby steppes provided plenty of good duck hunting, which had been my favorite recreation in Alaska. I found some Russian acquaintances who liked hunting as well as I did, and we usually made up a party. And when the weather was especially fine, we had family picnics in the woods and along the river.

The country and the people and the life suited us fine. We paid no rent, and food was abundant and cheap. Eggs cost a ruble a hundred, or half a cent apiece. Other prices were comparable. The peasants brought in their produce to a great bazaar, and sat in their carts or spread out their vegetables, fruits, meat, eggs, and cheese on the ground, and spent a sociable day while they disposed of their produce.

And my work absorbed every bit of energy I could generate. Serebrovsky had sent me to Kochkar because these were the first Soviet gold mines to receive modern equipment. He wanted me to rehabilitate these mines and use them as a model and training ground for the industry. When I arrived, they were just being brought into production. Some of these mines had been worked for a hundred and fifty years, and in one place there were still traces of a ring in which gold ore had been crushed by

driving horses over it. The mines had formerly been worked in three groups, divided among Russian, English, and French companies. Now they were all being brought under the central Gold Trust and equipped with up-to-date imported machinery.

During the Revolution and Civil War period, however, all the mines had been flooded, most of the head-frames and Cornish pumps had been destroyed, the steam-power plant had been partially wrecked, and the balance of it moved away. What remained of the mill was considered too worn-out and antiquated to be put into operating condition. I found that sinking operations were already under way on several shafts that had to be sunk to a depth of five hundred feet before any ore could be mined. New heavy pumping equipment was on hand for de-watering another shaft to a depth of a thousand feet, and new American milling machinery had been ordered for a plant with a daily capacity of six hundred tons.

It didn't take me very long to discover that I had a huge job on my hands. None of the workmen had had any experience with mechanized mining, and even the older engineers had never seen any of the new milling equipment except as pictures in catalogues. I saw that it would be necessary to teach each individual workman drilling, timbering, blasting, operation of the milling machinery, and especially, care of equipment. I put on some digging clothes and went to work with the men, and I followed that practice during all my years in Russia.

I had one amusing experience with an old Russian miner soon after I came to Kochkar, and before I knew a word of the language. I came up behind this old fellow while inspecting a mine one morning, and saw that he was using

a drilling machine improperly. He wasn't holding down the machine with his hands to get the utmost out of it. So I came up behind him, put my arms around him and my hands over his on the handles of the machine. He glanced around in surprise and struggled a bit, but I held firm, and nodded reassuringly to show I was trying to teach him something for his own good. I couldn't talk to him.

Soon he seemed to get the idea, and I let loose. When I started off, he dropped the machine and headed for a chain ladder leading out of the shaft. I could see he was indignant. So I strode up to the ladder, reached for his pants cuffs, and dragged him down again without a word, picked up the machine, and put it in his hands. I motioned to him to go ahead, which he did.

Somebody apparently observed this incident, and soon it was all over the mines. I heard it later in mines in remote parts of Russia, thousands of miles from Kochkar. It was finally picked up by the author of a textbook on mining, and used as an example of how engineers should get down into the mines and work with the men.

The people in Berlin had told me the truth, however, when they said that Russian engineering traditions tended to keep engineers and officials in good clothes and in their offices, well out of the dirty mine shafts. One day soon after I arrived at Kochkar, a group of two hundred engineering students came along to our mines for some practical experience; most of them were just beginning university work. The Gold Trust had hurriedly set up special schools in order to train additional mine managers, and the few existing mining academies were being expanded as rapidly as possible to supply the growing need for technical personnel.

When I went through the mill, this group of Young Communists were standing around with notebooks and pencils, drawing pictures of machinery. I called some of them around me, and suggested that they go to work at once as operators in the mill. I told them that, by actually performing the different operations, they would learn better than in any other way, and could later train workmen more easily.

They were outraged, and curtly informed me that they were future engineers, not workmen. I decided to make an issue, and posted orders that they would not be permitted to enter the plant unless they followed my instructions. Some of them tried to stir up trouble for me; they demanded to know how a foreigner could forbid Soviet citizens to enter their own property, and even appealed to their institutes for help.

Fortunately for my prestige, the authorities backed me up and ordered the students to do as I had suggested. If these young people yielded with bad grace in the first place, they came around to my point of view later. In a few weeks a committee waited upon me and thanked me, in the name of the group, for showing them how to get the best out of their limited time in the mines.

This incident threw some light on Serebrovsky's astonishment in Alaska, when he discovered the general superintendent of our largest gold mine coming out of the tunnel in his digging clothes and sitting down just as he was, to eat with his own miners. I saw that Russians, even under their Soviet system, were a long way from our American forms of industrial democracy. And they still are so; although I must say that the authorities are trying

to break down the caste lines between ordinary labor and so-called specialists.

About this same time, I had another experience which speeded up my study of the Russian language. My wife's interpreter, a Young Communist girl from Sverdlovsk, was very ambitious, and wasn't satisfied to give instructions to the cook about what to get us to eat. She kept begging me to let her translate technical stuff in my office. So one day, when my own interpreter was off somewhere, I told this girl she could help me out.

Among our most prized possessions at that time was an old American drill-sharpening machine. Unfortunately, however, the original dies and dollies had been lost, and substitutes provided which were locally made. The substitutes proved unsatisfactory, so I wrote out a telegram to Moscow as follows: "Send me some American wet dollies and dies," and gave this message to the girl to translate into Russian.

An hour or so later, my office was suddenly filled with a disturbed-looking crowd of men, including the telegraph operator and several of the engineers and managing staff of the mines. They hemmed and hawed, apparently not desiring to hurt my feelings, and finally one of the men mentioned that I had sent off a very peculiar telegram to Moscow.

I replied there was nothing peculiar about it, as I had simply ordered some parts for the drill-sharpener. A joyful light appeared suddenly in the eyes of all the men present, and the telegraph operator hurried out of the room. My ambitious translator, it seemed, had turned my telegram into the following Russian message: "The American's dolly has wet itself and died."

I have explained how I attempted to get cost sheets for these Kochkar mines in Moscow, and how a young German economist working for the Gold Trust had informed me that it was not necessary to pay any attention to costs under the Soviet system, because low costs in one mine would balance high costs in another. This young man's theory seemed to be generally prevalent among the Communists at the time, but it naturally wasn't acceptable to me. I knew very well that it wasn't possible to exercise any sort of control over a group of mines without close attention to costs of production, labor costs, and the like, and I couldn't see what difference it made whether the mine was being operated in Russia or in Alaska.

As soon as I had looked over the mines in Kochkar, I began to dig into the figures for output per man and similar information, and after some difficulty discovered that the output per man per day was less than one-tenth that of American workmen in Alaskan mines. Even after accounting for the ignorance and lack of training of the Russian miners, this discrepancy was altogether too great, and showed that something serious was wrong with the methods of operation.

I put my mind to the matter, and reached my own conclusions. Then I asked the Communist manager of the mines to call a conference of the Russian managing staff, including the engineers, and laid my figures before them.

"As I see it, the trouble is that your men are all working for wages by the day," I said. "For that reason, they don't do any more work than they have to in order to get by. They must have more incentive if they are to be induced to work harder. I suggest that we install a system of piece-

work or bonus and arrange for some kind of contract labor."

My suggestion was received in a kind of horrified silence, and the manager abruptly changed the subject. A friendly engineer later advised me not to mention this proposal again, as it was contrary to Communist ideas, and might get me into trouble.

That's the sort of things engineers were up against in the Soviet Russia of 1928. The Communists were in complete control, as they still are, but the Communists in those days were even more hampered than they are today by several such fantastic formulas as the one I have mentioned. They surrendered these fetishes of theirs reluctantly, one by one, as the years went by, and it became more and more obvious that they didn't make sense.

It is hard to believe now, looking back over the changes which have occurred in Soviet industrial practice since I began to work in Russia in 1928, that the Communists ever possessed this attitude toward piece-work, contract labor, and cost-accounting, all of which have become the most striking features of their industrial system in recent years.

V. I LEARN ABOUT KUMISS

THE Ural Mountains are the dividing line between Europe and Asia, and in our mining town of Kochkar in the southern Urals it was brought home to us almost every day that we were living in Asia. The tribes, as the Russians call the Asiatic peoples, were settled all around us, and we saw representatives of a dozen different racial groups.

Among our workers in the mines, we had a number of Tartars. These people are entirely different from most of the tribesmen, being better specimens physically and more advanced in their mode of living. The Tartars claim to be descended from the members of the Golden Horde, one of the sections of Genghis Khan's victorious Mongolian armies which swept over Russia and on into Europe centuries ago and ruled this part of the world for a long time.

Several generations ago, the Tartars had begun to give up their wandering life as herders and settled down to occupy adobe or wooden houses the year around. They kept themselves at least as clean as the Russians and showed more aptitude than the other tribes for picking up industrial occupations. Many of them had worked as miners before the Revolution, and I found that they provided about the best labor in this region.

But they had remained a very simple people, as one of my experiences with a Tartar miner soon after I came to

Kochkar will serve to show. One Sunday morning this miner called at my home to remind me that this was a special religious festival day in the Russian church, and wished me the equivalent of many happy returns. He then added suggestively that the mine manager who had lived in this same house before the Revolution had handed out a glass of vodka to anyone calling upon him with good wishes on festival days, and hinted that it was my obligation to do the same.

I brought out a bottle of vodka, together with a small whiskey glass. At sight of the latter, the Tartar pulled a long face, and let me know that the former manager had always provided a tumbler. I acceded to tradition, and the Tartar, having filled the tumbler to the brim with vodka, asked for something to eat with it.

We had just finished boiling a ham for the evening meal, so I cut off a piece and made him a sandwich. He gulped down the whole tumbler of vodka, and then took a bite out of the sandwich. Suddenly his face began to turn purple. He looked at me as though I had poisoned him, threw the sandwich on the floor, and bolted out of the door as if a policeman was after him. I had no idea at the time what was wrong with him, but learned later that Tartars are Mohammedans, and it was therefore against his religious principles to eat pork.

In 1928, so far as I could observe, the Communists had not begun to interfere much with the Asiatic tribes. Later, I was to see Communist reformers turn these tribal people upside-down, attempting to alter their social customs and mode of life completely. A tug of war ensued, which hasn't ended yet, between tribesmen determined to keep

their old customs and Communist reformers determined to change their customs.

But nothing of the sort had started when I came to Kochkar. The Tartar miners practiced their Moslem rites without noticeable interference. At some distance from the mines, out on the broad steppes, or plains, lived the real nomad tribes, occupying skin tents, or yurts, in the summertime, and settling into villages of adobe houses during the winter. These tribes gained their livelihood from their herds; they owned herds of camels, milk-mares, and sheep, and these animals produced their food, their clothing, and their houses.

The nomad tribes near Kochkar were mostly Bashkirs and Kirghiz, who were horsemen and dressed and acted unlike the Tartars in the towns. I ran across their collections of black felt tents frequently in the course of my hunting and inspection trips, and sometimes stopped to talk with them. They were invariably suspicious of the Russians, but accepted me as a foreigner and treated me more or less as an equal.

These tribes kept very much to themselves, and would have little to do with the Russian town-dwellers, whom they seemed to regard with a mixture of distrust and contempt. They were all Mohammedans, and faithfully practiced their religious rites; I suppose their priests had warned them that the Communists were anti-religious, which of course was true. They were dirty and uncivilized, by city standards; few of them could read and write.

The Bashkirs and Kirghiz came into Kochkar only once in a while, in order to visit the bazaar and exchange some of their animals and animal products for the goods made by peasants or in factories. But their needs were simple,

and they managed to provide most of them for themselves. Polygamy was common among them. One Kirghiz tribal chief proudly informed me that he had eleven wives and eighty-eight children.

Scattered over the steppes also were villages of Orenburg Cossacks, who are not Asiatic tribes like the others I have mentioned, but who had come out to the frontier generations before and gradually set up a sort of tribal organization of their own. The Cossacks are a mixture of farmer and horseman, who are professional fighters part of the time and cultivate their own lands the rest of the time. They adhere to the Russian Orthodox religion, or did so at the time I first knew them, and kept pretty well separated from the Mohammedan nomad tribes.

The Cossacks, being professional fighters, had all taken an active part in the World and other wars. They had penetrated far into Europe during some of the campaigns and received a new impression of the world. When they came back to the Urals after the wars, they re-named their towns and villages for cities they had learned about in their travels.

During my trips around Kochkar, I even came across Cossack villages named Paris, Berlin, and Leipzig. These Cossack villages were a colorful sight on festival days, when the men put on their bright Tsarist uniforms and paraded up and down the street, as often as not toasting the Tsar and cursing the new Government. In those days, such conduct was still tolerated.

I was making a trip across the steppes one day in the single automobile owned by the mine administration, an American car several years old which had become rather temperamental and was reserved only for long trips. As

we approached one of the Cossack villages, we saw from the distance what seemed to be a dust storm. As we came closer, it turned out to be a free-for-all fight in which practically all the men and women of the village were taking part.

They were using any weapon which came to hand, including rocks of considerable size, and the balalaikas and accordions which some of them had been playing before the battle started. After the excitement had died down a bit, we questioned some of the participants and discovered that this was one of the big church festival days—the Trinity—which had been set aside by accepted tradition as a day to settle accumulated disputes among relatives, friends, and neighbors.

The festival was held during two days in June. On the morning of the first day, every member of the village dressed up in his or her best clothes, and those who could afford it put down a strip of carpet from their homes to the church. They all attended church services, whether they paid much attention to religion otherwise or not, then went back to their homes, rolled up their carpets until the next year, and started out on a round of calls from house to house.

Strong drink was the order of the day at each house, and after a few calls, the vodka began to take effect. When they had all gotten drunk enough for their purposes, they began to bring up all the disputes of the past year, all the insults they had swallowed or slights they had fancied. They worked themselves up to a sort of frenzy, and then the battle started.

Tradition allowed this free-for-all fight to continue through the afternoon and evening of the first day and the

morning of the second, with time out, of course, for fuel to the flames in the shape of more drink. Before the end of the second day, every man and woman was expected to sober up, and forget their differences until the next year. The Cossack villagers assured us that this arrangement worked out very well, because when a dispute came up at any other time during the year, someone always reminded the disputants that they could settle their differences when the Holy Trinity festival came along, so the village had peace for 363 days of the year.

After I had put things in running order at the mines in Kochkar, I was instructed to make tours of inspection to adjacent mining districts, and saw something of the life of other nomad tribes which occupied the steppes with their herds and had hardly become aware as yet that any such system as Bolshevism existed. These tribal groups were settled all through the southern Urals, and on the endless steppes of Kazakhstan, that great nomad Soviet republic to the south of the Urals.

Toward the end of 1928, I received instructions to visit Bashkiria, the particular habitation of the Bashkirs, a species of nomad tribesmen with whom I was already familiar, from having seen them on the steppes near Kochkar. A guide was sent up from Bashkiria to conduct me to the group of gold mines which I was to inspect. The man sent for me was one of the few Bashkirs who had ever been outside the area covered by his tribe in their wanderings. He had gone a long way; in fact, he had been sent to America for training as a mechanical engineer and had been educated at Carnegie Tech.

This Americanized Bashkir considered it his pleasure and duty to introduce me to the Bashkirian social life of

the period. The highlight of my trip was an evening spent as the guest of a Bashkirian "kumiss king." Kumiss is fermented mare's milk, prepared in large skin bags; it is slightly intoxicating, very fattening, and immensely popular with the nomads.

I was introduced to this keen-eyed old horseman one morning, and he invited me to dinner the same evening in one of his skin tents, together with my guide. We were ushered into the large yurt, whose floor and walls were covered with fine rugs. My host apologized as I entered, and continued to apologize all evening, because his Number One Wife had gone off for a visit, and had taken his best yurt along with her, so that he was obliged to entertain me in the tent of Wife Number Two.

The tent was bare of furniture of any description. But in the middle of the floor stood two large lacquered tubs, one of which I soon learned was filled with kumiss and the other with a sort of mutton stew. Beside the tubs lay the only utensils, four lacquered cups holding about a quart each, one for the use of each of us. The host and the other two Bashkirs squatted cross-legged on the floor-rugs, and I folded myself up as best I could.

My host then plunged his arm into the stew up to his elbow and busied himself for some time raking most of the mutton fat over to my side of the tub. It seems that this was my due as the honor guest from distant lands. Meanwhile my legs had begun to get cramped, so I lifted up the side of the tent and stuck my feet outside, rolled over on my stomach, pulled out my jack-knife and began to steer some of the leaner pieces of mutton in my direction. For if there is anything I cannot abide, it is mutton fat.

This action, it soon appeared, was an inexcusable boner. The host made it clear to my interpreter that he was insulted because I had spurned his mutton fat. A sort of international crisis seemed to be coming along. Fortunately, I remembered at this moment the experience I had a few weeks before with the Tartar miner to whom I had given a ham sandwich.

With a solemn face, I explained to my interpreter that my religion forbade me to eat mutton fat, just as his religion forbade him to eat pork. The Carnegie Tech man transmitted this misinformation without batting an eye, and my host accepted the explanation as completely satisfactory. The Bashkirs downed five or six quarts of kumiss while I was struggling to put down one, and the four of us finished off the stew, into which a whole fat-tailed sheep had been put. The Bashkirs, who wore sleeveless shirts, continued to plunge their arms into the stew up to their elbows to get a handful of the meat, and licked off the gravy which ran down their arms.

Later in the evening, we climbed on horses and moved across the steppes about ten miles to a Bashkir winter settlement, consisting of adobe houses. A few of the richer ones owned wooden houses, and in one of these an entertainment had been arranged for my benefit. About twenty of us, all men, sat cross-legged on the wooden floor; the only piece of furniture in the house, a wooden table, was occupied by two young men who played native songs for us on long wooden home-made flutes. Then women came in, by twos and threes, performed some of their graceful and unusual native dances for us, and slipped away. My blunder during the dinner was forgiven and forgotten, and we parted late in the evening on the best of terms.

That was the kind of life common among Bashkirs and the other Asiatic tribes when I went to Russia in 1928. The Communist revolution was eleven years old, and people like this had hardly been touched by it. Some of their young ones were beginning to get ideas, and were restive; the Communists were encouraging them to break away from the old life. But the majority of the tribesmen lived as they had done for centuries.

As I soon learned, I reached Russia barely in time to see something of the tribes in their traditional setting. The Communists had already announced that nomad life was demoralizing, and must be broken up, although I did not know this at the time, and neither did many of the tribesmen. A new kind of life was being mapped out in Communist headquarters at Moscow for these herder-tribesmen, and for many other groups of people in Russia at the same time. Campaigns were being laid to break up the social, economic, religious and cultural life of all the tribes, and start them off along new paths into a kind of life which the Communists considered more suitable and useful for them and for the Bolshevik system.

It so happened that I saw a great deal of the process which the Russians describe as "de-nomadization." In plain English, this means the complete destruction of the old tribal organization of these peoples, and their conversion by persuasion if possible, or by force if necessary, into settled farmers under state control or wage earners in state-owned factories and mines. My work for the Gold Trust kept me traveling in those regions where the nomads were being reorganized, and I had a good view of the process from the beginning. I shall describe something of

this process later. I was able to understand what was going on better because I had come to Russia in time to see the old life and manners of the tribes, and to estimate just how great the differences were between the old life and the new.

VI. AN UNRECOGNIZED REVOLUTION

WHEN I went to Russia, I knew, of course, that there had been a Revolution in that country in 1917, and that it had been followed by years of civil war. As I came to know some of the Russians, I saw that the sufferings of those years had made deep marks, and that some of them had not recovered yet; the Civil Wars were a common topic for conversation and a favorite theme for plays, as they still are. Most of the Russians, I am sure, wanted no more revolutionary disturbances.

Since, as I understood it, the Russian Revolution was over and done with, it never occurred to me that the country was headed for another social upheaval almost as profound and unpleasant as the first one. I wasn't looking for anything of the sort, and didn't have enough Russian background at the time to appreciate the meaning of this Second Russian Revolution when I saw it taking place.

But looking back at it now, I can see that the events of 1929 and the years following were just as much a revolution as the years following 1917. I watched this second social upheaval from a position very close to it, and can testify that it brought so much confusion and bitterness and suffering that the 1917 Revolution could hardly have been worse. And a new kind of civil war grew out of this Second Revolution, with brother set against brother and Russian against Russian just as certainly as in the earlier decade. The tragedy of this second disturbance is

that there seems to be no end to it; it has flared up again recently almost as fiercely as it did in 1929.

Our family reached Russia at the moment when the effects of the First Revolution and Civil Wars had been almost corrected, and the people were living a fairly comfortable and agreeable life. That was true, at least, in our mining town in the Urals. In Kochkar, existence went along pretty smoothly during our first eighteen months in the place. People were living what I would call a normal life in a rather rough mining town; for us, at least, the life had been endurable and even pleasant.

Of course, there had been difficulties; it wasn't possible to take thousands of completely green workmen, who had never even seen any modern mining machinery, and hope to operate mechanized mines without plenty of setbacks. I could give some examples of what happened to the expensive imported machinery in our American mill during the time we were getting it started which would make an engineer's hair stand on end.

The Russians, workmen and Communist managers alike, had an exaggerated impression of what American machinery could do; having discarded other forms of Deity, they set up these machines in the place of the old gods. And they didn't get the idea that these machines had to be carefully treated if they were to operate; the machinery in our mines and everywhere else deteriorated far too rapidly; and still does so because Soviet workmen haven't yet got the idea of how to handle machinery.

Nevertheless, somehow or other, we managed to get the Kochkar gold mines operating, as well as our new American mill. Our property was the most progressive in the industry, and thousands of students were being passed

through our mines and mill to get an idea of how mechanized mining was worked. As soon as they had a smattering of training they were rushed into the field and put to work.

I had already seen enough of Soviet industry to realize that it reflects the man at the top even more than industry in the United States. Serebrovsky was all over the place, and made his mark wherever he went; he was accepted as a stern but fair-minded dictator and obtained strict obedience to his orders. Serebrovsky held dominion over other Russians partly by his enormous energy, which is far less common in Russia than in our country; he never seemed to run out of motor power. Gold production was going up fast, both in lode and placer mines, and new methods and equipment were being poured into mines and fields as fast as equipment could be had from abroad and men and women trained in half-baked fashion to operate it.

I had gotten the Kochkar mines and mill operating well enough so that they could be left to other management for considerable periods, and was being constantly sent out to other mines, inspecting new or restored properties and outlining a program of development. My knowledge of Russian had reached the point where I could carry on without an interpreter for ordinary purposes, and this was a great help to me. I believe that a considerable part of whatever success I had in Russia was due to my knowledge of the language.

I was given my first assignments outside Kochkar before the end of 1928, and inspection trips came along more frequently in 1929. During this period I not only visited all the gold mines in the southern Urals, but traveled down into Bashkiria. I also began to make excursions into

Kazakstan, which was later to become one of the chief fields of development, not only for the gold industry, but for most other important minerals, notably coal and iron, lead, zinc, and copper. It was an exciting experience for a mining engineer to get a look at some of these deposits in Kazakstan, which were practically unknown outside Russia at the time, and to see how important some of these deposits must be.

Up to the winter of 1929, matters were going as well as might be expected, not only in the gold industry but in others with which I was familiar. The Communists were beginning to force the pace of industrial development, and there were already rumors in the air of far more grandiose plans than had yet been announced. It seemed to me, even then, that they were undertaking more than was practicable, considering the fact that they had so few trained workmen, engineers, and managers. It hurt me to see so much waste around me; waste of ore, waste of machinery, and waste of human energy. But I couldn't foresee that all this was a drop in the bucket compared to what would happen a little later.

At the beginning of the winter of 1929, I decided to take a trip to the States to put my two daughters in school. I had worked myself pretty well down, and needed a respite. Serebrovsky agreed to let me go, and suggested that while I was in the States I should line up about ten first-class American gold mining engineers to help us out. He hinted that we had just gained a good start in the gold industry, and that expansion would continue at the same or a greater tempo. I understood that American engineers were also to be engaged in large numbers for copper, lead, zinc, and iron mines, where three or four American

engineers had been active since the winter of 1927. This was the beginning of the great American invasion, which brought up our colony of mining engineers to about 175 men for a couple of years, until the policy was reversed and then our number gradually dwindled until the summer of 1937, when I finished my Russian assignment, the last as well as the first of our group.

When I took leave of absence from Russia in the winter of 1929, the process which I have called the Second Communist Revolution had not yet properly started. Life in Kochkar was still very much the same as it had been when we arrived there in May, 1928. The pace of life had been accelerated a bit, but that was all. The peasants still drove in to the bazaar in their primitive carts loaded with vegetables and dried fruits, eggs and chickens, cheese, and other products which they sold at extremely reasonable prices. The nomads still roamed the steppes or settled down for the winter in their collections of adobe houses which they built for this purpose. They still owned their great herds of camels and milk-mares and sheep.

In Kochkar, the process of "liquidating" the so-called "nepmen," or small private retail merchants, had been started but not completed; it had gone far enough to interfere a bit with our supply of clothing and manufactured goods. In 1928, we had found no difficulty in getting almost anything we needed, although the quality of most of the goods available seemed poor to us. But already in 1929, the shops were showing a shortage of some kinds of goods; some of the best of the private merchants had gotten into trouble with the Communist authorities and disappeared. Their shops were taken over by so-called co-operatives which made pretty much of a mess of the

business. However, prices were about the same for both food and manufactured goods as when we came.

I went off to the States with no feeling that there had been any great change in Russia since I arrived there eighteen months before, or that any great change was impending. Of course, I knew about the so-called Five Year Plan, but this was regarded at the time merely as a scheme to industrialize the country in a hurry; its true meaning wasn't clear yet to most outside observers, or to most of the Russians.

I had no trouble in finding first-class American mining engineers to come to Russia; our depression was well under way by the time I arrived in New York. But I got off to a bad start with the ten men I engaged by describing what I believed were actual conditions in Russia. Since I had come from Moscow only a few weeks before, they naturally thought that I knew what I was talking about, and so did I. I told them they could easily live in Russia, in the mining communities, for three hundred rubles per month; I assured them they could get good food and plenty of it for very low prices. I told them that the clothing and dry goods stores had a fair assortment of goods.

Well, I returned to Russia with some of the men I had persuaded to sign contracts for two years, and the place had changed so much while I was gone that I could hardly recognize it. The Communists had staged their Second Revolution, and had plunged the country into a state of confusion from which it hasn't yet emerged.

I found myself in the midst of what competent persons have described as one of the greatest social upheavals in history, but I didn't have enough background, as I have

said before, to comprehend much of what was happening beyond the details which I could see with my own eyes. And I can testify that the confusion in my own mind was matched by that in the minds of most of the Soviet citizens I met.

It appeared that some kind of an earthquake had shaken up most of the life with which we were familiar. My old acquaintances in Kochkar went around bewildered, as if they didn't know what had hit them. The normal activity of the place had been entirely upset; the shops and the bazaar and money and the conduct of individual lives were all different.

It was clear to me, for one thing, that Russia had entered upon a period of run-away inflation such as Germany had experienced a few years before. When I had left Kochkar, one ruble would still buy four spring chickens, or one hundred cucumbers, or one hundred eggs, or twenty watermelons, or six pounds of meat. The bazaars had been full of a wide variety of such foodstuffs as I have described before, as well as imported oranges, lemons, and fish. The clothing and drygoods stores still offered a fairly good range of imported articles.

During the few months I was gone, prices had gotten completely out of hand. Butter, which had been fifty kopecks, or half a ruble, per kilogram, was now eight rubles (today it is sixteen for the poorest quality). Eggs, which had been a ruble a hundred, were now a ruble apiece. A few months before we had been able to buy a whole wagonload of potatoes for fifteen rubles, but now we had to pay twenty rubles for a small pailful.

I could imagine what the American engineers who had come with me to Russia were thinking. I had told them

they could live on three hundred rubles a month, and it was clear that they couldn't live on a thousand. They must have thought I was romancing about other conditions, too. I had told them that shops were fairly well-stocked; they found them empty. I had told them there was an abundance of good food for sale at low prices; they found food was poor in quality and hard to get, and was outrageously high-priced. The peasant bazaar at Kochkar, where I had once seen as many as fifteen hundred carts assembled at one time, with a rich array of produce, had dwindled to a half-dozen forlorn-looking carts manned by depressed-looking peasants.

So many things were happening all at once that no one around me seemed to understand just what it was all about. And the men and women I associated with were too busy and tired to think for themselves about what was going on. The business of getting enough food and clothing for oneself and one's family was becoming more difficult every day, and took a large part of one's energy and time. Industry was being driven at a faster pace, too, and the tempo was designed to take all of the strength of a worker or an executive.

All of the newspapers, books, magazines, and radio stations in the country were controlled by the Government, which in turn was controlled by the Communist politicians. Through all these instruments of expression, the Communists were shouting the same explanations for what was going on. Most of the people around me either accepted these explanations, or kept still if they had any doubts, just as they do today.

Looking back at this period now, in the light of what I have since learned, it seems to me that the only ones

who knew what was happening at this time were the Communist leaders in Moscow's Kremlin. They had laid out a program for themselves, but kept its real purposes as secret as if they were generals of an army who had mapped out a surprise campaign against enemy forces.

In this case the "enemy" consisted of all groups which were supposed not to be "socialized," and of all others which, for one reason or another, threatened to obstruct the Communist campaign. The generals in the Kremlin had set out to break up all these groups, by one means or another.

The 1917 Revolution had been aimed at the imperial family, the aristocrats, the big merchants and landlords; it had abolished private ownership in banks and railways, mines, forests, factories and big estates. This had been a comparatively small matter, so far as the number of human beings involved was concerned. There were only three or four million of these people; a good many of them escaped from the country; those who remained were still being ostracized, compelled to get along as best they could and sinking lower in the social scale.

But now, after giving the country a few years to recuperate, the Communists had started off again, and this time they were out to break up much larger social groups, aiming at millions where only thousands had been affected by the 1917 Revolution. The biggest job they had taken on, truly an enormous one, was the reorganization of the peasants, who composed about 85 per cent of the whole population at this time. The Communists laid out a campaign to dispossess millions of the more ambitious and successful small farmers—who were given the unpleasant label of "kulaks," or fists—and to reorganize the whole

peasantry into sharecroppers on state-owned or state-controlled farms using large agricultural machinery. Russian farmers, it should be pointed out, by this time were all poor by American standards; the really well-to-do farmers had all been dispossessed in 1917.

Not only was this Second Revolution aimed at the farmers, but also at the private traders or nepmen who had set up shops in cities, towns, and farm villages, and were now to have all their property confiscated; at the nomads, the wandering tribesmen who lived out on the steppes as they had done for centuries; and at some smaller groups.

For this vast campaign, the Communists had to marshal all their "shock-troops" which they had been creating for twelve years: the powerful federal police force, the soldiers of the standing army, and above all the young people, boys and girls alike, who had been drilled all these years in Communist ideas, and were disposed to take orders without questioning. These organized units were sure to win against unorganized "enemy" groups which didn't even know they were participants in a war until the Communist shock-troops hit them.

The Communists had launched this multiple campaign on half a dozen "fronts" at the same time they had set out upon a program of vast industrial expansion. They figured that the peasants, being dispossessed and forced out of agriculture, could be absorbed by industry. The same would be true of the nomads, even though the latter had never come in touch with machinery in their lives, and most of them had never even handled metal. It was a grandiose scheme, as viewed on paper charts by the schemers in the Kremlin, and even as viewed from a distance by idealists in our own and other western countries.

Reformers in all countries became envious of the Communists, who had the power to compel other people to accept their notions of what was right and proper for them.

But we were no distant idealists or Communist schemers; we were in the midst of this social upheaval, not standing off to one side looking at it. We had the same lowly point of view as most of our Russian friends.

Here is what we saw. First, our shops were becoming worse and worse, and their supply of goods was almost at the vanishing point. Why was this? Because the state had confiscated the property of little private retailers, without having any idea of how to run their business. Second, our supply of food, which had been abundant and cheap, had become scarce and dear. Why was this? Because the state had dispossessed hundreds of thousands of ambitious and energetic small farmers and thrown their land-holdings into so-called collective farms under state control before there was any evidence that such farms would work well or had any qualified personnel to direct them. Third, the manufactured goods which appeared in our shops—and as quickly disappeared—were of terrible quality. Why was this? Because the state had taken over all factories, large and small, and had forbidden the importation of foreign consumer goods. It had done this before any personnel had been trained to direct these state-owned factories. The people must either accept the outrageously bad products of these factories or do without.

It was apparent to me, as soon as I returned, that the gold industry was less demoralized than most enterprises at this time, thanks to the energy and clear-headedness of Serebrovsky, and probably also to the fact that Stalin and

his fellow-Georgian, the Commissar of Heavy Industry, Ordjonikidze, retained their personal interest in our industry, and looked upon us as a favored group.

We were thus among the first to profit from a new system soon organized by the Communists to apportion the limited supply of food and manufactured goods available. It was clear by this time that reorganized industry and agriculture could not produce enough of anything to satisfy the needs of all Soviet citizens for years to come. The Communist leaders had to decide whether to turn back some of the factories and shops and little farms to their former holders, or to keep things as they were and make a large section of the people go on short rations. They chose the second alternative. The first would have been better for the people's comfort, but would have meant a retreat from socialism.

The next question to decide was how to distribute the available supplies to the right people; that is to say, to the people considered most useful by the Communist leaders. This was arranged by establishing a nation-wide system of ration cards and "closed shops." The ration cards, which were distributed only to urban workers, enabled them to buy enough food for their own needs at prices about equal to those in force before inflation. Peasants were supposed to find their own food. Members of dispossessed groups were ignored; they could buy enough to keep them alive at inflation prices if they had the money; otherwise, it was their own lookout. The closed shops were reserved for certain groups of workers; each worker was assigned to a certain closed shop, where he could buy whatever clothing and other manufactured articles were available at pre-inflationary prices.

Our first closed shops in Kochkar were pretty bad; they made us miss the old private traders more than ever. But at least the prices were more moderate than they had been. And gradually the closed shops of some groups began to get much better than those of other groups. The federal police, for example, developed wonderful closed shops, the envy of other groups of workers. And the Gold Trust did very well with its closed shops from the beginning; we were one of the favored occupations.

As for the foreign engineers and workers, the Soviet Government was very generous. It established for their exclusive use a chain of closed shops called Insnab, which stocked the best available food and clothing and household necessities, including many imported articles not obtainable elsewhere in Russia at the time. Thousands of foreign workers and hundreds of foreign engineers were being brought to Russia at this period, with contracts for good salaries in their own currencies. In these new shops, they not only avoided the quicksands of inflation prices, but were able to make large profits, if they were unscrupulous, by reselling Insnab products to their Russian associates. I am glad to report that most Americans were not guilty of this practice. We in the Gold Trust were not so greatly tempted as some others, since our Russian associates had access to closed shops almost as good as our own. People who work with gold, whether under a Soviet system or capitalism, seem to get more nearly what they want in the way of material comforts.

In this Second Communist Revolution, we lost one group of workers in the gold industry which I suspected could not easily be spared. The Communists, making war on all groups which were considered non-socialist, de-

cided that our prospectors, or lessees, were in this category, and decreed that they should be liquidated without delay. These prospectors had been discovering a lot of new gold deposits for us, and it seemed a pity to discourage them.

I had learned by this time that it was best not to comment on such moves, as I usually found that I was running head-on into some Communist phobia when I did comment. But I was glad to learn later, when I read Serebrovsky's book on the gold industry published in 1936, that Joseph Stalin also evaluated the importance of our prospectors correctly, and was probably undesirous of giving them up at this time. It will be recalled that Stalin said in 1927, according to this book, that prospectors must be retained in the gold industry and would be very useful.

Why, then, were they given up in 1929? I suspect that Stalin couldn't insist upon his own way in the matter at that time. He was not nearly so strong a figure then as he is now, and was still battling with some of the Communist leaders about certain theories. It seemed logical to give up the prospectors if one also gave up the kulaks and similar groups. I judge from Serebrovsky's book that Stalin surrendered a point to his Communist opponents in this case.

At any rate, we lost our prospectors. They were an uncouth lot of men, rough and ready in their manners and methods, and probably none too honest. But they had a nose for gold, as they have in all other countries I know. They had been ferreting out new deposits and new fields for us, led on by the ancient incentive of making money quickly.

Now it was proposed to replace them by collectives of youthful geologists, boys and girls who were training

for mining work or had just come out of school. These adolescents, it was contended, could do the work of the bleary old prospectors much better than they had done it. They didn't drink hard liquor and they were sincere Young Communists. Wasn't it natural, asked the Communist reformers, that they could do any kind of work better than these old fellows, most of whom couldn't even read and write?

Well, I was willing to be shown. But I had seen prospectors at work in the United States and Alaska, as well as in Russia for a couple of years. I had seen that these old codgers in Russia had the same feel for gold-bearing rocks as their fellows in the United States. And I doubted whether boys and girls out of school, however honest and sincere they might be, could manage this rather erratic occupation quite so well as the outlawed prospectors.

The liquidation of the prospectors didn't bother the old fellows much; it was not nearly so brutal in its effects as the liquidation of kulaks. Prospectors were often not family men, and were frequently more or less tramps. But the kulaks were the most solid, respectable element in the countryside. They were so solid, in fact, that the Communists couldn't see any way to dislodge them except by force.

The prospectors quickly found work in the mines; they all knew the business of mining, of course. They joined trade unions, in order to get work and obtain good standing with the Communists, and limited their heavy drinking to free days. I talked to some of them I had known before out in the fields; they seemed moderately content. Years later, however, when a fresh opportunity offered itself to them to hunt for gold, most of them again hit the long trail to the East.

VII. LIQUIDATING KULAKS

ABOUT the middle of 1930, we had to give up our home at Kochkar, our first home in Russia and the one we liked best. From that time onward, my work consisted largely of inspecting and reorganizing ailing mines, which kept me on the move most of the time.

My wife and I were both sorry to leave that rough mining town in the southern Urals, which still holds pleasant memories for us. We came to Kochkar at a time when the Russians were still free to exercise their natural hospitality and friendliness to foreigners, and before they were pushed about and harried by Five Year Plans. The Kochkar people weren't disturbed by shouts of foreign spies so long as we stayed there, and they welcomed the four of us as if we were their own people. I only regret that circumstances later made it difficult, even impossible, to continue those early friendships.

We had left our two young daughters with relatives in the United States at the end of 1929, and my wife insisted upon going along with me in most of my travels for several years after 1930. Siberia and Kazakstan were, and still are, rough country, and transportation hasn't been organized so that the traveler who leaves the main railways can get around with comfort. But such conditions didn't scare my wife; she saw about as much of the backwoods regions of Siberia and eastern Russia as I did, and I must say that she often came back from these trips in better shape than I could manage.

In the course of our travels, beginning in the late summer of 1930, we found ourselves in the very midst of the process which the Russian authorities described as "liquidating the kulaks." This process is generally understood as an agricultural revolution; but it was as important to industry as it was to agriculture. And it played a big part in the expansion of our mining work, so I should tell what I know about it.

I wouldn't blame Americans for shying off at the bare mention of such phrases as "liquidation of the kulaks." I know that before I went to Russia the frequent use of such phrases discouraged me from reading anything about the country. I was disposed to believe that the whole country and everything in it was a lunatic asylum, and let it go at that. The Russian Communists, I discovered later, sprinkle their conversation and writings with hundreds of similar phrases, and these phrases are picked up with relish all over the world.

"Liquidation of the kulaks," however, was more than a phrase to us; it was a reality which faced us almost everywhere we turned over a period of years. I have related how, before we had seen anything of the process itself, we saw one of its principal results at Kochkar in 1930, when the small farmers stopped coming to the big Kochkar bazaar, and we could no longer get food in the market except for the most outlandish prices. We had to depend for food upon our ration cards and closed stores, run by the Government in a very amateurish fashion.

Traveling through Siberia after the summer of 1930, we encountered thousands of men, women, and children, packed with their bags and bundles into mixed passenger and freight cars, often wedged in so tight they could

hardly sit down, being shifted around by guards armed with rifles. There seemed to be no end to them; they filled up almost every station for a time, and all the available rolling-stock seemed to be used for them.

These people were obviously small farmers, used to hard work, as we could tell by the rough hands of both men and women, and they had the ruddy complexions of people who work on the land. But at this time they were a bewildered-looking lot. They didn't seem to know what was happening to them, or why, and neither did the other Russians who saw them being moved about. Well, these people were "kulaks," and they were being "liquidated." This was the process which has been described by many an "expert" in many a book about Russia.

I watched the "liquidation of kulaks" before I had read any expert interpretations of the process. It just looked to me as if most of the small farmers in Russia were being moved from one place to another under police guard. I had no more idea why this was being done than most of the Russians seemed to have. It seemed that orders had come from Moscow to do this, so it was being done.

On one of our journeys, my wife and I found ourselves in a "Maxim Gorky" car with some of these people, who were being shifted somewhere. "Maxim Gorky" was the name given by the Russians in those days to a freight car used for passengers. It was taken from the name of the famous Russian writer, who was also a tramp in his early days. Nowadays, the Russians are forbidden to use this name for such cars.

In conversation with the farmers in our car, we found that they had no idea where they were being taken, nor what they were going to do when they got wherever they

were going. They said they had been rounded up by the police and other officials in their village, and told that they were to be taken off somewhere. They were given a short time to get some of their belongings together, and then had to go off leaving their houses and furniture behind.

These people may have been exceptions, and others may have been told where they were going, and why. But I doubt it. All those I saw looked completely puzzled.

There have been many books describing this period, and telling just how and why the kulaks were being liquidated in this manner. The authors disagree considerably on many points, but I have combined the most plausible explanations together with what I saw for myself to give an idea of what actually happened.

In a previous chapter I have described this period as the Second Communist Revolution, and have said it was aimed principally at the small farmers, who had hung on to their small plots of land and small collections of domestic animals through the first Revolution. In 1917 and the years following, these small farmers had gladly helped the Communists to take away the land held by large land owners, because they were promised the privilege of dividing such lands among themselves, and that is what they had done.

When I came to Russia in 1928, there wasn't a single large land owner in the country except the state itself. The land was broken up into little plots, each cultivated by a small farmer and his family. These small farmers lived in villages together, often at some distance from their land, as they have done in Russia for centuries. You couldn't see in the length and breadth of the country a single farm such as we have in America.

At about the time we arrived in Russia, the Communist General Staff in Moscow had decided to reorganize agriculture. They didn't like the idea of small farmers cultivating their little plots and selling their products in bazaars and markets such as the one at Kochkar, just as they didn't like the idea of the nomad herders roaming around on the steppes with their flocks of sheep and cattle and milk-mares. These people who somehow derived their living from the land composed about 85 per cent of the population of Russia at that time, and the Communists decided they couldn't get ahead with their plans to industrialize and socialize the country so long as these small farmers were left as they were.

So the Communists worked out an ingenious scheme for reorganization of Russian agriculture. They had already confiscated all of the largest estates and turned them over to the state, which operated them as huge state farms. Now the Communists got the idea of combining small farmers into "collective farms" under state control. Since these small farmers already lived in villages, as I have explained, and even had a loose kind of co-operative organization in most villages, it would be a simple matter, the Communists decided, to persuade the small farmers to pool their land holdings and domestic animals and thus create thousands of collective farms, in which the small farmers would lose their deepseated desires to own land of their own and acquire instead the socialist instinct. At the same time, these collective farms could use large-scale agricultural machinery and make use of the latest technical methods.

The scheme had much to recommend it, especially in Russia, where the small farmers already lived in villages

and where nothing new would have to be built to install the proposed new system. It seemed to be merely a question of persuading the small farmers to adopt the scheme by showing them it would be to their advantage.

But small farmers are conservative; they are not easily persuaded to accept changes, especially changes which affect the whole routine of their daily lives. And some small farmers had managed to accumulate a little more stock than their neighbors; perhaps an extra horse or a couple of cows or even a tractor. These people didn't see why they should turn their things into a collective farm on a basis of equality with those who had nothing to turn in. To make matters worse, the first collective farms were not run properly, and the people who went into them were miserable.

Some time before this, in order to equalize the holdings of small farmers, the authorities had instructed the farmers in every village to be divided into three classifications: poor peasants, middle peasants, and kulaks. This last name has an unpleasant meaning in Russia, having been used before the Revolution to describe the village money-lenders who charged excessive rates of interest and gradually got hold of most of the land and employed labor to work it. But it couldn't have any such meaning any more, because the Communist authorities didn't allow money-lending or mortgages of any kind. The farmers classified as kulaks were taxed a much heavier percentage of their crops and earnings than the other small farmers. This classification caused much ill feeling in the villages, and aroused one group against the others, which was one purpose the Communists had in mind. By arousing the small farmers against each other, they figured they could

reorganize agriculture with less difficulty. At this time the term "kulak" was used concerning any farmer who opposed generally passively the collectivization of the farmers.

The Communist General Staff at Moscow had given orders to hurry up the process of collectivization; but officials in the farm villages reported that the small farmers were balking. They especially blamed the kulaks, who, they claimed, were persuading the other peasants not to join collective farms. The people in Moscow decided that something would have to be done to break the log-jam in the villages. They therefore announced one day that the kulaks must be liquidated as a class.

Every village was instructed to round up its kulaks. The classification had been made so roughly that different officials had entirely different ideas of what a kulak was. One writer defined a kulak as a small farmer who had seven chickens instead of six, and that definition didn't seem to be far wrong in some villages. It was certainly nearer the truth than the definition of a kulak as a rich peasant. There weren't any rich farmers in Russia in 1930, by our standards. Some villages reported that they didn't have any kulaks. The authorities replied: "You must have kulaks. Every village has kulaks." So the village officials looked around for some families to round up as kulaks.

Several hundred thousand families in the thousands of farm villages were classified as kulaks, and the process of liquidating them began. First, they were driven out of their houses, and their furniture, domestic animals, and all except a few personal possessions were taken away from them. The confiscated houses and goods were turned over to the collective farm to be used for clubs and offices.

Then the dispossessed small farmers and their families

were herded into district centers, and arrangements were made to ship them off to some distant part of the country. It can be imagined what scenes of disorder and confusion resulted in all these farm villages. The small farmers who had not been labeled kulaks assisted in the process of liquidation because many of them had been envious of their better-to-do neighbors and others hoped to get something out of it.

The task of handling the kulaks and their families after they had been dispossessed was entrusted to the federal police, who were well organized to take care of it. It is my opinion that the liquidation of kulaks was based as much upon the need for unskilled labor in industry during this period as it was upon the desire to reorganize agriculture. I can testify that we had difficulty keeping enough labor on hand in the mines, and I believe this was also true in the new industrial centers. Housing conditions in these places were still very bad, the shortage of food and other human needs was great, and retail stores were so badly organized that there seemed no immediate prospect of improvement. Free workers therefore were constantly on the move in search of more agreeable living conditions, and the labor turnover was terrific and very bad for production.

It seems to me that a conversation something like the following must have taken place at Communist headquarters in Moscow. One of the big Communists said: "Well, what will we do about it? We can't put through our plans for industry unless we have a few million workers who will stay put. There will be too much of a howl if we simply make the free workers stay where they are. What can we do?" And someone may have answered: "Why not

liquidate the kulaks? We can kill two birds with one stone: get these obstinate small farmers away from the villages, where they obstruct our scheme for collectivization, and at the same time get plenty of industrial labor which will stay put because it is under police guard." At any rate, the dispossessed small farmers were rapidly converted into forced labor in mines, factories, and forests.

I had my first direct contact with kulak mine labor in 1931, while I was working as chief engineer of a group of copper mines in the northern Ural Mountains. One day several train-loads of men, women, and children arrived at these mines, consisting of dispossessed small farmers and their families under police guard. I was told they had been brought from villages two thousand miles away. They had been on the way for weeks, as the railways were even more over-loaded at that time than they are now, and they were a rather melancholy sight.

This group was assigned to one mine for work, thus making it easier for the police to keep track of them and avoiding any conflict between these people and the free miners. I saw quite a lot of these kulaks from the beginning, since it was my job to teach them how to mine. Being farmers, they naturally knew none of the processes.

The newcomers all seemed to be completely bewildered by what had happened to them, and very few of them ventured to make complaints of any kind. It was easy to understand why they were bewildered; they had lost their homes, had been forcibly removed from lands occupied by their families for generations, and put at unfamiliar work in unfamiliar surroundings. I learned later that many of them had never before been outside the little districts where their homes were.

They lived very much the same as other miners, whose standards of living at that time, from the American viewpoint, were unbelievably low. This was the period when the food shortage was most acute, partly because these kulaks were no longer working their land. But they got their share of what was available. They occupied old houses which had been used by the miners before the Revolution, and by our standards, were hovels of the worst type. Eventually, however, some of them put up better houses of their own.

The working hours and rates of pay for the kulaks were the same as for the other miners, with the exception that the kulaks paid out a portion of their wages into a fund to look after old and disabled persons in their own group. They were free to move around within the district, an area of several miles, so long as they reported once a week to the chief police officer.

Very few of these people made any effort to escape; their experiences seemed to have broken up any spirit of defiance they may have had before. Once in a while two or three of them walked off and didn't come back; I never learned what happened to such people. The authorities from the beginning tried to encourage them to submit promptly to circumstances; those who buckled down to work were soon given their lost citizenship rights and other little privileges.

Later, I ran up against similar groups of ex-farmers engaged in forced labor in gold, copper, and zinc mines in which I worked in several parts of the country. Usually, they were kept at work separately, for purposes of convenience, although they were not isolated in ordinary life, and mixed as much as they liked with the free miners.

When they were brought into a mine, production ordinarily fell off for six months or longer, and then gradually climbed up again. The kulaks, who had been the most intelligent and ambitious small farmers, became superior miners too, once they had learned the trade.

I don't know how many of these kulaks were put at forced labor; I have run across them all over the eastern districts of Russia, not only in mines, but in factories and forests and at work on dams, railways, canals, and power-houses. There were so many of them that they converted the federal police into the largest single employers of labor in Russia, and gave the police a great reputation with the Communist General Staff for getting things done.

The police have an advantage over other Soviet organizations; they can always count on a steady supply of labor, no matter what kind of living conditions exists where the given task has to be done. The kulaks formed the backbone and basis for the great forced labor army which has worked in Russia ever since. This army of forced labor mixes up murderers, thieves, and other ordinary criminals with such groups as kulaks, whose offense was of a different nature.

The Communist authorities probably are well pleased with the results of the liquidation of the kulaks. It worked out about as they had figured, in that it broke up the opposition to collectivization in farm villages, and at the same time provided plenty of much-needed fixed labor in new industrial centers.

Of course, it was pretty hard on the people of Russia at the time. It was tough on the kulaks themselves, who weren't exactly criminals in our sense of the word, but nevertheless were treated like criminals for years. Some of

them haven't yet succeeded in working off their "crimes." And it was also tough on the rest of Russia's population, who went short of food for years because the liquidation of kulaks removed so many competent farmers from the land. The liquidation also caused many of the kulaks to destroy their domestic animals so that now, after almost ten years, there is still a shortage of meat and dairy products in Russia.

I don't know whether the liquidation of kulaks was of any benefit in the long run to our mines or not. True, we got some much-needed labor, consisting of intelligent people who could be trained quickly. But, on the other hand, we had to put up for years with a food shortage which kept all our workers in poor shape for getting full production.

VIII. SOMETHING WRONG WITH COPPER

IN recent years, I have been reading books which undertake to interpret what was taking place in Russia during my period of work in that country. I have been interested to note that many writers select the year 1930 as the most critical year since the Civil Wars for the political group now in power. In 1930, say these observers, it was touch and go whether the battle with small farmers would succeed or not, and meanwhile the food shortage was becoming so acute that industrial workers were on the verge of revolt.

The writers of a majority of books about Russia are either tourists, who almost never write anything worth more than entertainment, or they are what the Russians would call specialists. These latter people are very fond of studying documents and figures given to them by the Soviet authorities. It is not surprising to me that such observers, sitting in Moscow, reading the excited articles in the Moscow newspapers, and seeing that the country actually was experiencing a food shortage, should get the idea that industrial workers were on the verge of revolting against the authorities.

But I spent this period down among the rank and file of the industrial army, sweating and straining like the workers around me to meet increasing demands for production. And I never got any feeling that the workers were on the verge of revolt. It is true that, even in the

Gold Trust where conditions were better than average, the men and women workers were being driven at an increasing and tremendous pace, and were finding living conditions less pleasant in almost every respect than in 1928 or earlier. The industrial workers were being packed closer and closer together in whatever housing was available in industrial and mining towns, and the supplies of food and clothing, even with the advantage of ration cards and closed shops, were becoming far from adequate. It was a disagreeable period for everybody.

Looking back at those times now, it seems to me the people were kept too busy to think about revolt. They were pushed around much too rapidly to organize any sort of opposition movement. It is probably true that the authorities had the support of only a fraction of the population in what they were doing at this time. Most of the people in Russia were (and still are, for that matter) small farmers, and a large part of these people didn't like what was going on. The Communist leaders held all the important weapons, and used them with great skill. They stationed their "shock troops" in the right place to get the proper results.

I don't suppose any group of men ever tried to do so many things at once in any other period in history, unless perhaps in war-time. And this resembled a war, and actually was a war. The Communists showed that they considered it such by using war terms in their newspapers and magazines and over the radio stations and in public speeches in the mines and factories and in the farm villages. Communist "four-minute men" were all over the place, shouting about one "victory" after another on one "front" after another. The technique developed in the

World War was utilized and improved for this new kind of warfare. Anybody and everybody who stood in the way of any of the Communist campaigns was labeled an "enemy" and the full force of the propaganda machine was turned against such people. However it is doubtful if the authorities in Moscow wanted this campaign carried on as ruthlessly as it was. I later met quite a few men who had been severely punished for some of the measures they had taken.

It's no wonder, with so many things happening at once, and in the midst of so much deliberately-created noisiness, that the Russian people were too much confused to think about revolt of any kind. Such a milling of people I had never seen before nor hope to see again. On the one side, millions of small farmers were being rooted out of places where they thought they were fixed for life, and hurled into distant places and new occupations. On the other hand, millions of untrained or part-trained men and women were being pitchforked into industries which were springing up from nothing, and placed under the supervision of other men and women who had almost as little real conception of what it was all about. To use the word of an American comedian, it was "colossal."

Our gold industry, as it happened, was more or less an oasis of peace in all this turbulence. Serebrovsky was an organizer of the first quality, and he had laid sound foundations for this rapidly expanding industry. He had assembled a group of managers and engineers who quickly learned their business, and had himself inspired confidence and trust in the thousands of young workers who were pouring out of his new training institutes as soon as they got a smattering of theoretical knowledge.

We had also been a favored group from the beginning, and the system of playing favorites was more strongly established than ever since the introduction of ration cards and closed stores. This system exercised some part, too, in creating loyalties for the Communist régime. Those who were favored, and these included all the workers with the most opportunity to get together and talk things over, were given access to better food and clothing than scattered groups. Looking around and seeing that they were better off than some others, these groups felt they had a vested interest in the *status quo*.

During the latter part of 1930, our Gold Trust was combined with the Copper and Lead Trust in one gigantic Nonferrous Metals Trust. Although I didn't know it at the time, this move meant plenty of grief for me. The copper and lead mines were giving a lot of worry to the authorities, and for this reason they assigned Serebrovsky to take them over in addition to gold, and see what he could do with them.

Moscow had poured vast sums of money into the copper and lead mines; the best modern equipment had been brought in, and experts of all kinds engaged abroad. Yet production had failed to show results at all commensurate with the amount of money and energy expended. Make all allowances for the fact that raw peasants were being used for miners and that callow engineers just out of short courses were supervising many of the mines, and still the results were terrible.

Our Gold Trust, while theoretically under the Commissariat of Heavy Industry, had actually maintained an autonomous position, on account of Serebrovsky's personal influence in the Kremlin, and his close relationship

with Ordjonikidze. But the copper and lead mines had been directed by the leading Communist authorities in the Urals, and in particular by Yuri Piatakoff, the Vice-Commissar of Heavy Industry, who was an Old Bolshevik like Serebrovsky.

I had become well enough acquainted with some Russians by this time to hear part of the gossip going around, and I had known for some time that there was bad feeling between Serebrovsky and Piatakoff. My chief was very blunt in his speech, and spared nobody's feelings when he felt he should say something, although he was usually very mild-mannered. In fact, there was a saying in the Gold Trust that Serebrovsky would yell and curse only when he liked a man; if he was always polite, it was a sign he didn't like you.

But he had made it very plain that he didn't like Piatakoff. He was reported to have said publicly, on more than one occasion, that he had no confidence in Piatakoff's leadership. It was therefore a slap in the face at Piatakoff when the copper and lead mines were handed over to Serebrovsky. All this didn't seem of any importance to me at the time, but later it became closely connected with some of my most dramatic, and also most disagreeable, experiences in Russia.

Conditions were reported to be especially bad in the copper mines of the Ural Mountain region, at that time Russia's most promising mineral-producing area, which had been selected for a lion's share of the funds available for production. American mining engineers had been engaged by the dozens for use in this area, and hundreds of American foremen had likewise been brought over for instruction purposes in mines and mills. Four or five Amer-

ican mining engineers had been assigned to each of the large copper mines in the Urals, and American metallurgists as well.

These men all had been selected carefully; they had excellent records in the United States. But with very few exceptions they had proved disappointing in the results they were obtaining in Russia. When Serebrovsky was given control of copper and lead mines, as well as gold, he wanted to find out why these imported experts weren't producing as they should, and in January, 1931, sent me off, together with an American metallurgist and a Russian Communist manager, to investigate conditions in the Ural mines, and try to figure out what was wrong and how to correct it.

We didn't have to look far to see that conditions were just about as bad as they could be, from the engineer's point of view. Bear in mind that I had been working almost three years in Russian mines by this time, and knew what to expect. But I had worked almost exclusively in the gold mines under our one trust, and was really thunderstruck when I saw how much worse conditions were in copper and lead mines.

We discovered, in the first place, that the American engineers and metallurgists were not getting any co-operation at all; no attempt had been made to provide them with competent interpreters, and in some places there was no means of communication possible between them and the Russian engineers and managers. Most of them had tried hard to earn their money and make themselves useful; they had carefully surveyed the properties to which they were assigned, and drawn up recommendations for exploitation which would have been immediately use-

ful if applied. But these recommendations had either never been translated into Russian or had been stuck into pigeon-holes and never brought out again.

Conditions among the Russian executives and workmen seemed to be almost as deplorable; I encountered a spirit such as I had never known among the people in the gold mines working under Serebrovsky. The attitude of the people I came in contact with as soon as we began looking into the difficulties of the Copper and Lead Trust was what impressed me more unfavorably than anything else.

Our Gold Trust was better run in every way than the copper-lead industry and, above everything else, the personnel had a different spirit. Our workmen sometimes didn't have enough to eat, and there was plenty of grumbling, but it was more or less good-natured. Everybody connected with the Gold Trust felt that we were getting ahead, and the sense of succeeding made up for discomforts.

But it was different in the copper and lead mines. They were enveloped in an atmosphere of failure. The shortage of food and other consumer goods was worse here, because distribution was badly organized. There was also a serious lack of equipment, largely because the materials purchased abroad and manufactured in Soviet factories was clumsily apportioned to get the best results. The mining methods used were so obviously wrong that a freshman engineering student could have pointed most of them out. Areas were being opened up too large for control, and ore was being removed without the proper timbering and filling. In an effort to speed up production before suitable preparations had been completed, several of the best mines had been badly damaged, and some ore bodies

were on the verge of being lost beyond recovery. There had been serious cave-ins in several mines, and many others had caught fire, with much loss of valuable ore.

I shall never forget the situation we found at Kalata. Here, in the northern Urals, was one of the most important copper properties in Russia, consisting of six mines, a flotation concentrator, and a smelter, with blast and reverberatory furnaces. Seven American mining engineers of the first rank, drawing very large salaries, had been assigned to this place some time before. Any one of them, if he had been given the opportunity, could have put this property in good running order in a few weeks.

But at the time our commission arrived they were bogged down in red-tape. Their recommendations were ignored; they were assigned no particular work; they were unable to convey their ideas to Russian engineers through ignorance of the language and lack of competent interpreters. They had become so disgusted with the situation that they were occupied almost entirely with operating an "American boarding house" which they had set up for themselves. These expensive engineers, so badly needed in Russia at that time, were taking turns as bookkeepers and house-managers and buyers for their little eating and rooming house, and that is just about all they were doing. I must say that their talents were being exerted to good effect within this limited field; I didn't find a better boarding house in Russia.

But of course they weren't satisfied with such conditions, any more than the other American engineers we had been questioning in other mines. They had worn themselves out trying to get assigned to some post where they could do constructive work. Of course, they knew what

was technically wrong with the mines and mills at Kalata, and why production was a small fraction of what it should have been with the amount of equipment and personnel available.

Our commission visited practically all the big copper mines in the Urals and gave them a thorough inspection. We found that conditions everywhere were just about as I have described them at Kalata. There was a surly atmosphere of defeatism hanging over these mines which was novel in my experiences in Russia. We spent some time classifying the data we had assembled, and finally submitted our report to Serebrovsky.

I should have mentioned that in spite of the deplorable conditions I have described, there had been few howls in the Soviet newspapers about "wreckers" in the Ural copper mines. This was a curious circumstance, because the Communists were accustomed to attribute to deliberate sabotage much of the confusion and disorder in industry at that time. But the Communists in the Urals, who controlled the copper mines, had kept surprisingly quiet about them.

In July, 1931, after Serebrovsky had examined the report of conditions made by our commission, he decided to send me back to Kalata as chief engineer, to see if we couldn't do something with this big property. He sent along with me a Russian Communist manager, who had no special knowledge of mining, but was given complete authority, and apparently was instructed to allow me free rein. I had never had the least trouble with this manager from the start; he didn't pretend to any expert knowledge and had sense enough not to interfere with men who did have special training.

The seven American engineers brightened up considerably when they discovered we really had sufficient authority to cut through the red-tape and give them a chance to work. They neglected their boarding house, I am afraid, for the next few months, and went down into the mines alongside their workmen, in the American mining tradition. Before long, things were picking up fast, and within five months, production rose by 90 per cent.

The Communist manager was an earnest fellow; he tried hard to understand what we were doing and how we did it. But the Russian engineers at these mines, almost without exception, were sullen and obstructive. They objected to every improvement we suggested. I wasn't used to this sort of thing; the Russian engineers in gold mines where I had worked had never acted like this. I couldn't quite make out these engineers, but decided they were jealous and didn't want the Americans to succeed where they had failed.

However, I succeeded in getting my methods tried out in these mines, because the Communist manager who had come with me supported every recommendation I made. And when the methods worked, the Russian engineers finally fell into line, and seemed to get the idea. It seemed to me that the whole atmosphere of the place had improved; this was a big area, too, extending over thirty miles and connected by a narrow gauge railway. Most of the mines had been developed before the Revolution by foreign concessionaires.

At the end of five months, I decided I could safely leave this property. The seven American engineers were still on the job, and although still handicapped by lack of knowledge of the Russian language, had been enabled to get

their ideas across and had been assigned regular work, for which they were all anxious enough. Mines and plant had been thoroughly reorganized; there seemed to be no good reason why production could not be maintained at the highly satisfactory rate we had established.

I drew up detailed instructions for future operations, which the seven American engineers had helped to work out. I explained these thoroughly to the Russian engineers and to the Communist manager, who was beginning to get some notion of mining. The latter assured me that my ideas would be followed to the letter, and I went off pretty well pleased with myself, with a sense of a sound job of work completed. Not only were the production figures at these mines vastly improved, but I flattered myself sound foundations had been laid for future steady progress. I was never more hopeful anywhere about the future of a Soviet project than I was when I left Kalata. I suppose it was fortunate that I couldn't foresee what would happen to these mines; it might have discouraged me too much to continue my work.

IX. MY SUSPICIONS ARE AROUSED

IN the spring of 1931, having worked at a heavy pace for several months, I decided to take a quick vacation in Europe; "to go out for a while," as the foreigners in Russia usually describe such a trip. I requested permission from Serebrovsky, and the latter asked me if I would combine business with pleasure. He told me a large purchasing commission was headed for Berlin, under the direction of Yuri Piatakoff, who, you will remember, was then the Vice-Commissar of Heavy Industry. The proposed purchases to be made included some expensive mining equipment, and he suggested that I might advise the commission on such purchases.

I agreed to do this, and arrived in Berlin at about the same time as the commission. I found it consisted of about fifty persons, headed by a few prominent Communist politicians of whom Piatakoff was the chief, together with secretaries, clerks, and technical advisers. There were also two other American engineers, who had come along to give technical advice on other purchases than mining.

The Russian members of the commission didn't seem any too well pleased to have me around at this time; their attitude made me recall the rumors I had heard about ill-feeling between Piatakoff and Serebrovsky, and I decided I was unwelcome because I was regarded as Serebrovsky's man. But I told them Serebrovsky had asked me to ap-

prove every purchase of mining equipment, and they agreed to consult me.

Among other things, the commission had put out bids for several dozen mine hoists, ranging from one hundred to one thousand horse-power. Ordinarily these hoists consist of drums, shafting, bearing, gears, etc., placed on a foundation of I- or H-beams.

The commission had asked for quotations on the basis of pfennigs per kilogram. Several concerns put in bids, but there was a considerable difference—about five or six pfennigs per kilogram—between most of the bids and those made by two concerns which bid lowest. This difference made me examine the specifications closely, and I discovered that the firms which had made the lowest bids had substituted cast-iron bases for the light steel required in the original specifications, so that if their bids had been accepted, the Russians would have actually paid more, because the cast-iron base would be so much heavier than the lighter steel one, but on the basis of pfennigs per kilogram, they would appear to pay less.

This seemed to be nothing less than a trick, and I was naturally pleased to make such a discovery. I reported my findings to the Russian members of the commission with considerable self-satisfaction. To my astonishment, the Russians were not at all pleased. They even brought considerable pressure upon me to approve the deal, telling me I had misunderstood what was wanted.

I knew I hadn't misunderstood, and wasn't able to figure out their attitude. I finally told them that if they bought these hoists, they would have to act on their own responsibility, and that I would see to it that my contrary advice

got on to the record. Only after I had made this statement did they drop the proposal.

The incident left a bad taste in my mouth. Either these Russians were too proud to admit that they had overlooked this obvious substitution in the specifications, or there was some kind of personal reason involved. It might very well be graft, I thought. If I had not discovered the substitution of cast-iron in the specifications, the commission could have gone back to Moscow and showed how successful they had been in beating down prices for the mine hoists. At the same time, they would have paid out money for a lot of worthless cast-iron, and it would have been possible for the German concerns to pay over substantial sums privately in graft.

But I had done my duty, and the purchase had not gone through. The commission had purchased the right kind of hoists in the end, and no harm was done. I decided to say nothing about the matter to anybody.

The incident left my mind, and did not come back to me until after I had gone home on sick leave in the spring of 1932. Soon after my return to Moscow, I was informed that the copper mines at Kalata were in very bad condition; production had fallen even lower than it was before I had reorganized the mines in the previous year. This report dumbfounded me; I couldn't understand how matters could have become so bad in this short time, when they had seemed to be going so well before I left.

Serebrovsky asked me to go back to Kalata to see what could be done. When I reached there, I found a depressing scene. The Americans had all finished their two-year contracts, which had not been renewed, so they had gone home. A few months before I arrived, the Communist

manager, who had learned something of mining under my direction, had been removed by a commission which had been sent in from Sverdlovsk, Communist headquarters in the Urals. The commission had reported that he was ignorant and inefficient, although there was nothing in his record to show it, and had appointed the chairman of the investigating commission to succeed him—a funny sort of procedure.

During my previous stay at the mines we had speeded up capacity of the blast furnaces to seventy-eight metric tons per square meter per day; they had now been permitted to drop back to their old output of forty to forty-five tons. Worst of all, thousands of tons of high-grade ore had been irretrievably lost by the introduction into two mines of methods which I had specifically warned against during my previous visit.

We American engineers had evolved for some of the mines at Kalata a more productive system of working the stopes, and had managed to introduce it in spite of the persistent opposition of Russian engineers. We knew, however, that this method could not safely be applied to the remaining mines, and I had explained why this was true, carefully and at great length, both to the former Communist manager and to the engineers. To make completely certain that the situation was understood, I left instructions in writing when I left, warning against extension of this method.

But I now learned that almost immediately after the American engineers were sent home, the same Russian engineers whom I had warned about the danger, had applied this method in the remaining mines, with the result

that the mines caved in and much ore was lost beyond recovery.

Much discouraged, I set to work to try to recover some of the lost ground. The atmosphere around the place impressed me as unpleasant and unwholesome. The new manager and his engineers were sullen, and made it plain that they wanted little to do with me. The food shortage was at its height in the Urals at this time, and the workmen were in a more ugly mood than I had ever seen them. Living conditions had been permitted to decline along with production.

I worked as well as I could to get things moving again; but I didn't have seven American engineers and a friendly Communist manager to help me out, as I had before. Then one day I discovered that the new manager was secretly countering almost every order I gave. I saw there was no need to stay any longer, and caught the first train I could get back to Moscow. I was so disheartened at that time that I was prepared to resign and leave Russia for good.

When I reached Moscow, I reported exactly what I had discovered at Kalata to Serebrovsky. He brushed aside my resignation and told me I was needed more than ever now, and shouldn't think of leaving. I told him it was no use for me to try to work in Russia, when I could get no co-operation from the men in the mines. "You needn't worry about those men," he said. "They will be attended to."

He started an investigation right away, and in a short time the mine manager and some of the engineers were put on trial for sabotage. The manager got ten years, the maximum prison sentence in Russia, and the engineers

lesser terms. The evidence indicated that they had deliberately removed the former manager in order to wreck the mines.

I was satisfied at the time that there was something bigger in all this than the little group of men at Kalata; but I naturally couldn't warn Serebrovsky against prominent members of his own Communist party. It has never been my policy to get mixed up in politics. But I was so sure that something was wrong high up in the political administration of the Ural Mountains that I agreed to stay on in Russia only after Serebrovsky had promised me that I would not be sent back to work in the copper mines of the Urals.

There was another good reason why I had no desire to go back to the Urals. I had gone out one day, during my first visit to Kalata, walking with another American engineer from one mine to another. We stood for a few minutes on a dump of ore near one of the mines, silhouetted against the sky. Suddenly bullets began to whizz past me, and I wasted no time in taking shelter. That was a turbulent period, and it was not uncommon for Soviet officials to be shot at, or even killed, and I didn't suspect that those bullets were intended for me. But as I got to thinking over subsequent events, I began to wonder.

I studied all the information I could get hold of about the trial of the manager and engineers at Kalata. It seemed clear to me at the time that the selection of this commission and their conduct at Kalata traced straight back to the Communist high command in Sverdlovsk, whose members must be charged either with criminal negligence or actual participation in the events which had occurred in these mines.

However, the chief secretary of the Communist Party in the Urals, a man named Kabakoff, had occupied this post since 1922, all through the period of great activity in developing the mines and industries of the Urals. For some reason which was never clear to me he had always commanded the complete confidence of the Kremlin, and was considered so powerful that he was privately described as the "Bolshevik Viceroy of the Urals."

If this man's record was examined, there was nothing to justify the reputation he appeared to have. Under his long rule, the Ural area, which is one of the richest mineral regions in Russia and which was given almost unlimited capital for exploitation, never did produce anything like what it should have done.

This commission at Kalata, whose members later admitted they had come there with wrecking intentions, had been sent directly from this man's headquarters, and yet when this evidence came out at the trial, there was no reflection against Kabakoff. I told some of my Russian acquaintances at the time that it seemed to me there was a lot more going on in the Urals than had yet been revealed, and that it came from somewhere high up.

All these incidents became clearer, so far as I was concerned, after the conspiracy trial in January, 1937, when Piatakoff, together with several of his associates, confessed in open court that they had engaged in organized sabotage of mines, railways, and other industrial enterprises since the beginning of 1931. A few weeks after this trial had ended and Piatakoff had been sentenced to be shot, the chief Party Secretary in the Urals, Kabakoff, who had been a close associate of Piatakoff's, was arrested on charges of complicity in this same conspiracy.

I was particularly interested in that part of Piatakoff's confession which concerned his actions at Berlin in 1931, when he headed the purchasing commission to which I was assigned as technical adviser. It then became clear to me why the Russians around Piatakoff had not been pleased when I discovered that German concerns had substituted cast-iron for light steel in specifications for mine hoists.

Piatakoff testified that anti-Stalin conspirators, headed by Leon Trotsky, the exiled former Commissar of War, needed foreign currency to build up a fund for their work abroad. Inside Russia, with so many conspirators occupying important positions, he said it was easy to get funds, but Soviet paper money was no good abroad. Trotsky's son, Sedoff, according to Piatakoff, therefore worked out a scheme to get foreign currency without arousing suspicion.

At his trial, Piatakoff testified that he met Sedoff in Berlin in 1931 by previous arrangement in a restaurant near the Zoo. He added: "Sedoff said that only one thing was required of me, namely, that I should place as many orders as possible with two German firms, and that he, Sedoff, would arrange to receive the necessary sums from them, bearing in mind that I would not be particularly exacting as to prices."

Questioned by the prosecutor, Piatakoff added that he was not required to steal or divert Soviet money, but only to place as many orders as possible with the firms mentioned. He said that he made no personal contacts of any kind with these firms, but that the matter was arranged by others without any further action on his part than throwing business to them.

Piatakoff testified: "It was done very simply, particularly since I had very many opportunities, and a fairly large number of orders went to those firms." He added that it was easy to act without arousing suspicion in the case of one firm because the firm itself had a fine reputation, and it was simply a question of paying slightly higher prices than were necessary.

The following testimony then was given at the trial:

Piatakoff: But as regards the other firm, it was necessary to persuade and exercise pressure in order to have purchases placed with this firm.

Prosecutor: Consequently, you also paid this firm excessively at the expense of the Soviet Government?

Piatakoff: Yes.

Piatakoff then went on to say that Sedoff did not tell him exactly what the conditions were, what the technique was for this transfer of money, but assured him that if Piatakoff placed orders with these firms, Sedoff would receive money for the special fund.

This passage in Piatakoff's confession is a plausible explanation, in my opinion, of what was going on in Berlin in 1931, when my suspicions were aroused because the Russians working with Piatakoff tried to induce me to approve the purchase of mine hoists which were not only too expensive, but would have been useless in the mines for which they were intended. I had found it hard to believe that these men were ordinary grafters, as they did not seem to be the kind interested in feathering their own nests. But they had been seasoned political conspirators before the Revolution, and had taken risks of the same degree for the sake of their so-called cause.

Of course, I have no way of knowing whether the po-

itical conspiracy mentioned in all confessions at this trial was organized as the prisoners said it was. I never attempted to follow the ins and outs of political disputes in Russia, and wouldn't have known what anti-Government conspirators were talking about if they had tried to drag me into their affairs, which none of them ever did.

But I am absolutely sure that something queer was taking place at Berlin in 1931, during the period mentioned by Piatakoff at his trial. I have already said that my experiences at that time puzzled me for years, and that I couldn't figure out any sensible explanation until I read Piatakoff's testimony in the Moscow newspapers at the time of his trial.

Another part of this testimony that some Moscow journalists found it hard to believe was that German firms should give commissions to Sedoff. But I have already mentioned in an earlier chapter that Russian émigrés were in the habit of collecting commissions from German firms for using their alleged influence to throw Soviet business in their direction. The managers of these German firms might consider that Sedoff was simply another Russian émigré, and would make the same kind of a deal with him that I know they had been making for years with other émigrés.

In such cases, it was the usual procedure for German firms merely to figure the promised commissions into their prices, and if the Russians accepted the prices nothing more was necessary. But in the case of these mine hoists, the commission must have been put so high that the firm had to juggle the specifications in order to clear its profit. When they did this, my attention was attracted and the deal was blocked. Piatakoff testified that he had to exert

pressure to have some orders passed, and I have told how pressure was put on me.

The testimony at this trial aroused a great deal of skepticism abroad and among foreign diplomats at Moscow. I talked with some Americans there who believed it was a frame-up from beginning to end. Well, I didn't attend the trial, but I did follow the testimony very closely, and it was printed verbatim in several languages. A great deal of the testimony about industrial sabotage sounded more probable to me than it did to some of the Moscow diplomats and correspondents. I know from my own experiences that a good deal of industrial sabotage was going on all the time in Soviet mines, and that some of it could hardly have occurred without the complicity of highly placed Communist managers.

My story is valuable, so far as this trial is concerned, only as regards the incident at Berlin. I have described what that was, and how, to me, Piatakoff's confession cleared up what had happened.

X. BLUNDERS AND PLOTS

HAVING been persuaded to change my mind and stay on for another go at reorganizing mines in Russia, I was given just about the toughest assignment imaginable in October, 1932. An SOS had been sent out from the famous Ridder lead-zinc mines in eastern Kazakstan, near the Chinese border. These mines, a former British concession owned by the Urquhart interests, are considered one of the principal lead-zinc properties in the world, and in addition the ore carries an unusually large amount of gold.

They are located in a remote part of the world, more remote in those days than it is now, since Kazakstan at that time almost entirely lacked railways or motor highways, and it has since acquired a few. I was first instructed to go down for a month to look over the property and see what could be done to bring its production back to normal.

I had been warned that conditions were pretty bad, but I wasn't prepared for anything quite so bad as I found. The methods which had been used in those mines were enough to break the heart of a mining engineer. They had resulted in several cave-ins so large that production had been almost stopped. The mines lie alongside a river, and the cave-ins had caused a sudden large increase in the flow of water which had overtaxed the installed pumping equipment. The mines were in such condition that they were

in danger of being lost beyond recovery at any moment through flooding.

The engineers, I discovered, had been divided in their opinions of the proper methods to work these mines, and had wasted more time in arguing about the merits of their respective schemes than in doing anything to keep the mines from being ruined. The Communist managers, under orders from Moscow to keep up to fixed production schedules, had insisted upon ore being taken out by any method whatever, without regard to the safety of the mines. They didn't know anything about mining, and had grown impatient with the engineers, I suppose, because the latter wasted so much time in theoretical arguments. Between them, the people at these mines had created a terrible mess.

It needed no more than a glance to see that something would have to be done quickly to save these mines from complete destruction. I telegraphed to Moscow reporting the situation, and outlining a plan of work. Meanwhile, I assumed responsibility for stopping that part of the work which threatened to flood the mines completely out. In about three weeks, I got back a reply instructing me to take over the mines as chief engineer, and to apply whatever methods I considered best. At the same time, the Communist managers apparently received instructions to give me a free hand and all possible assistance.

The local people proved to be a different lot from those in the mines at Kalata, and showed immediate confidence in my judgment. They gave me excellent co-operation during the entire seven months I spent at the mines. As a result, we managed to get the mines and mill back into fairly good shape within this period, so that ore bodies

were no longer in danger and production was brought to a satisfactory level.

The Government had spent large sums for modern American machinery and equipment for these mines, as for almost all others in Russia at that time. But a good part of this money might as well have been thrown into the river. The engineers had been so ignorant of this equipment and the workmen so careless and stupid in handling any kind of machinery, that much of these expensive importations were ruined beyond repair. For example, a fine large flotation concentrator had been erected, but was already in terrible shape after it had been used for a short period.

As a matter of fact, when I looked over the kind of workmen and managers being employed, I marveled that anything at all was left of the mines. Kazakstan is one of the minority republics of the Soviet Union, and the Communist authorities had passed a law some time before providing that all industries in minority republics should employ at least 50 per cent of the native races, both in production and management. This may be a very enlightened law, which appeals to professors and humanitarians in all parts of the world, but it didn't seem to work out in Kazakstan in 1932.

In this case, the native races were Kazaks and Kirghizians, nomad herders who were accustomed to a roaming life on the steppes. They had lived such a life until about 1930, when the Communists staged their Second Revolution.

I have told in a previous chapter about the liquidation of kulaks. This process had been accompanied by a similar process which the Communists described as de-nomadiza-

tion. Just as the authorities had labeled several hundred thousand small farmers as kulaks, and taken them off their land and put them at work in industries, mines, and forests under police guard, so they had removed hundreds of thousands of nomads from the steppes and put them at work in mines and factories or tried to induce them to settle down on collective cattle farms. They did this because they held the opinion that nomads are backward and cannot be raised up to the Communist notions of a higher civilization until they are taken away from the steppes and their roving life and changed into proletarians, or wage-earners, either in industries or on state-controlled farms.

I have told how the liquidation of kulaks resulted in a shortage of food which continued for several years. The process of de-nomadization aggravated the food shortage by causing the destruction of the nomads' herds. When the Communist "shock troops" began to break up these herds, and put pressure on the nomad owners to pool their animals in so-called collective farms, the latter simply killed their animals. At that time, I don't think the authorities worried about this, because they believed the herds could easily be replaced. They learned better later; there is still a terrific shortage of meat and dairy products in Russia today, in spite of expensive and laborious efforts in recent years to build up the herds again.

In such a place as Kazakstan, where most of the population had existed for generations on the products of the herds, the destruction of animals in the years following 1930 had very serious effects. I have been told that thousands died of starvation; whether that is true or not, I cannot say. But I can testify from my own observation that the former nomad herders were a long time recovering

from the effects of this turbulent period, when the Communist authorities organized an assault upon the nomads, and the latter developed a sort of mass hysteria which caused them to destroy their means of livelihood.

The ex-nomads who survived this period were rounded up, as the kulaks had been, and put to work in the mines and in the few industries which had been started at that time in the nomad regions. The well-to-do nomads, such as the "kumiss king" I had visited in Bashkiria, were taken over by the police and exiled to some region remote from their former homes, where they were put to work in forests or mines, or settled on cattle farms. Many of them resisted dispossession; these were adjudged criminals, and sent to jail or shot.

By the time I was assigned to the Ridder mines, the virtual civil war with the nomads had been fought and won. There were still occasional skirmishes with some nomads who stubbornly refused to give up their old forms of life, but for the most part the Kazaks and Kirghizians had admitted defeat and some of them were already more or less enthusiastic supporters of the new order. Such supporters were greatly encouraged by the authorities and liberally rewarded.

Thousands of Kazaks who had never known anything but the roving life of herders had been brought into the Ridder mines before I was sent there, and the mine managers were supposed to teach them the processes of mining, and at the same time to keep to their production figures. These newcomers also were supposed to get the same wages as other miners, and the management was expected at the same time to show a paper profit.

It is hard to imagine a tougher assignment than that.

These Kazaks and Kirghizians had never even seen a piece of machinery before coming to the mines. Out on the steppes where there is no timber, they had used buffalo chips for fuel and never had occasion to use even an ax. To make matters worse, few of them could understand a word of Russian.

It can be imagined what a heartbreak ing job it was to teach such workmen to use air drills, modern milling equipment, and especially to handle dynamite. I don't understand yet how they failed to blow up themselves and all the rest of us. My own worries on this subject were not quieted when I went into a bath-house one day and found a group of them bathing with cakes of cyanide which they had mistaken for soap.

Another trouble with these people was their diet. Being nomads, they were accustomed to exist almost exclusively on animal products—meat and milk in various forms. But their herds had been killed off and animal products were at a premium; in fact, they often simply didn't exist. So the tribesmen had to be induced to eat other things.

The usual diet for all miners at this time was black bread with whatever vegetables were available, and an infrequent meat meal. The tribesmen didn't take at all kindly to this diet. Most of them ate enough of the bread to keep alive, but would have nothing to do with vegetables. As a result, thousands of them came down with scurvy and filled up the hospitals.

The vegetable most often used in this section during the winter months was onions, which went well with the black bread and balanced the diet. But the nomads positively refused to touch the onions. The older people were particularly obstinate because they didn't trust the Russians.

They never had been on good terms with Russians, and now they blamed them for all their troubles, the loss of their herds and the like. They had an idea that any advice the Russians gave them would do them harm.

But the youngsters of the tribes were more open to reason. The medical authorities figured out a scheme to induce the Kazaks to eat onions. They rounded up some of their youngsters and sent them off to a nearby school, where they were shown the advantages of having vegetables in the diet. Then the youngsters were brought back to the mines with instructions to pass on what they had learned to their parents. In this roundabout fashion, the older people were finally induced to eat vegetables. Of course, it was too late for some of them.

It was a haywire business, as I have said, trying to operate large mines with such labor, and especially when the Communist authorities insisted that these tribesmen should be given 50 per cent of the responsible positions. Naturally, a lot of the native managers were just figure-heads; the main thing was to keep them from interfering. The job of operating mines under such conditions was almost impossible, and the difficulties were multiplied by the efforts to introduce modern mechanized machinery into the mines under the supervision of men who had never seen such machinery before.

Two of the younger Russian engineers at these mines impressed me as particularly capable, and I took a great deal of pains to explain to them how things had gone wrong before, and how we had managed to get them going along the right track again. It seemed to me that these young fellows, with the training I had been able to give them, could provide the leadership necessary to keep

the mines operating as they should. They were not Communists, but they had been trained under the Communist régime and apparently had the confidence of the authorities.

It was clear to me that these two young engineers had sensed what was wrong in the former methods of operation, but had been compelled to act against their better judgment by the Communist managers, who were ignorant of engineering problems and were chiefly interested in obtaining some immediate increase of production without regard to the future welfare of the mines, or even to the danger of losing great bodies of valuable ore.

I said to the two young fellows: "Don't let these Communist managers, or any others like them, push you into anything like this again. If you know what you are doing, and stick by your convictions, the main office in Moscow will stick by you, as they have done by me." I told them to let me know if they got into a tight position again. They promised me faithfully that they would do as I advised.

I made out an elaborate set of recommendations and instructions for additional improvements for mines and smelters. These instructions amounted to a blueprint detailing the proper methods for developing mines and plant for years to come. I went over these plans very carefully with the two young engineers, and there was no doubt in my mind that they fully grasped all of the plans, and the arguments which I produced for sticking closely to these plans.

It may be well at this point to jump ahead of my story, as I did in the last chapter, in order to finish up my experiences with these mines. One of my last jobs in Russia,

in 1937, was a hurry call to return to these same mines. Once more those fine mines were close to destruction. Thousands of tons of rich ores had already been lost beyond recovery, and in a few more weeks, if nothing had been done meanwhile, the whole deposit might have been lost.

When I began looking into what had happened, I saw a striking parallel between events here and those at the copper mines at Kalata. The Ridder mines, I discovered, had gone along fairly well for two or three years after I reorganized them in 1932. The two young engineers who had impressed me so favorably had remained in charge, and had carried out the instructions I had left them with noteworthy success. Considering the kind of workmen they had to deal with and all the restrictions which hedged their movements, they had performed marvels.

Then an investigating commission had appeared from Alma-Ata, the capital of Kazakstan, similar to the one sent to the mines at Kalata. From that time on, although the same engineers had remained in the mines, an entirely different system was introduced throughout those mines which any competent engineer could have foretold would cause the loss of a large part of the ore body in a few months. They had even mined pillars which we had left to protect the main working shafts, so that the ground around had settled.

One of the most flagrant examples of mismanagement concerned a rather elaborate ventilating and dust-collecting system which had been ordered for the lead smelter to prevent the poisoning of workers. This ventilating system, which cost a lot of money and was necessary to protect the health of workers in the smelter, had actually been

installed in the filter section of the mill, where there were no harmful gasses or dust of any kind. Now I am sure that every engineer will agree that such incidents cannot possibly be the result of mere stupidity, and I have already pointed out that the two engineers in these mines were unusually capable.

I went through the plant thoroughly, and drew up my report with great care, as I knew it was likely to be damaging to a number of managers and engineers. I was compelled to state, however, that the evidence strongly indicated a deliberate change in the methods of operating the mines from the time of the investigating commission's visit. It was necessary also to point out that my written instructions, which had been followed with good results for several years, had then apparently been thrown into the stove, and that methods had been introduced which my instructions had warned against.

I have failed to mention that the engineers of whom I have spoken were no longer at work in the mines when I arrived there in 1937, and I understood they had been arrested for alleged complicity in a nation-wide conspiracy to sabotage Soviet industries which had been disclosed in a trial of leading conspirators in January.

When I had submitted my report, I was shown the written confessions of the engineers I had befriended in 1932. They admitted that they had been drawn into a conspiracy against the Stalin régime by opposition Communists who convinced them that they were strong enough to overthrow Stalin and his associates and take over control of the Soviet Government. The conspirators proved to them, they said, that they had many supporters among Communists in high places. These engineers, although they

themselves were not Communists, decided they would have to back one side or the other, and they picked the losing side.

According to their confessions, the "investigating commission" had consisted of conspirators, who traveled around from mine to mine lining up supporters. After they had been persuaded to join the conspiracy, the engineers at Ridder had taken my written instructions as the basis for wrecking the mines. They had deliberately introduced methods which I had warned against, and in this way had brought the mines close to destruction.

I know that many observers are skeptical about the charges of wrecking conspiracies in Russia; I don't pretend to know anything about such matters except in those cases in which I have been directly concerned. In this case, I know that methods had been introduced into the Ridder mines which I had warned engineers there would be seriously destructive, if not fatal, to the mines. I know that these methods were introduced by the very engineers who had impressed me as particularly capable, and to whom I had explained in great detail why such methods could not be used. And I have seen confessions, signed by these engineers, which stated they had deliberately introduced these methods in order to wreck the mines as their part

XI. THE GOLD RUSH BEGINS

IN May, 1933, I received word that the Gold Trust was once more to be set apart by itself, with no further connections with other metal industries. Serebrovsky was to surrender responsibility for everything else except gold and platinum production, and I was to go back with him to gold mining. I was more than pleased by the course of events.

For almost three years, I had devoted most of my time to ailing copper, lead, and zinc mines. I had rushed from one group of mines to another, trying to repair the ravages of management which was either incredibly stupid or deliberately hostile to proper operation of the mines. I had discovered in this industry an atmosphere entirely different from that I had encountered in the gold industry, and had worked all of this time among sullen people who didn't seem to care whether or not the mines got going properly. My last experience in the Ridder mines of Kazakstan had been a little better; at least some people there seemed to want to improve things.

But it was a real joy to get back to gold, and especially so because the reorganization now taking place was the result of a momentous decision reached by the Communist authorities in Moscow. The old-time prospectors, who had been outlawed in 1929 as "unsocialized," were to be brought back and encouraged, and a whole system of concessions and leases was to be introduced for the purpose

of opening up new gold fields and getting gold out of the ground quickly.

I have told about my own doubts when the prospectors were outlawed in 1929, along with the kulaks and the nomads. The authorities had liquidated all these groups because they were believed to interfere with plans to re-organize agriculture, expand industry, and socialize the country. I have given some idea of how the dislocations resulting from these various reforms had just about put the country on the rocks.

In the gold industry, the loss of prospectors had made itself felt more gradually. The authorities had started out with the notion that they could replace these old-timers with "collectives" of student geologists. However, the scheme had failed to work in practice, as I had suspected. The Soviet gold industry at this time was actually only five years old; previous to 1929, practically nothing had been done to develop it. During these five years, immense amounts of money and energy had been poured into the industry, with less waste of capital investments than in most other Soviet industries during the period.

The development of the gold industry had gone straight ahead, with very few setbacks. We had opened up dozens of new mines and rehabilitated hundreds of old ones. Our dredging fleet, which consisted in 1928 of a few antiquated dredges, had grown to eighty-five or ninety modern steam and electric dredges. Most of the larger mines had been equipped with power-houses, mechanical drills and hoists, crushers, ball mines, and cyanide plants.

In 1928, we had so few trained engineers or managers that some mines had to get along without a single person of experience or any kind of training. Now, during these

five years, the industry had put thousands of students through simple engineering courses and had given them brief practical training in such centers as the Kochkar mines. Enough of these people had been trained so that they could be scattered around to give some organized, sensible direction in all gold fields. At the same time, thousands of ex-farmers had been taught the rudiments of mining processes, and hundreds of them had developed to the point where they could make good foremen, and could be distributed among the mines as instructors.

But with our mines and mills developing at a great rate, prospecting had fallen steadily behind schedule. The young student geologists had failed to discover the new fields and deposits which we needed. We had caught up with development schemes in the available fields, and needed new areas for exploitation if we were to expand at the desired rate. Here was a problem. It was referred to the Communist General Staff in Moscow, like all problems of national importance.

However, it was hardly possible to consider prospectors as "socialized" in 1933 any more than it had been in 1929. But, on the other hand, it had been demonstrated during these five years that prospectors were desirable, if not absolutely necessary, for further expansion of the Soviet gold industry. The Communist General Staff was therefore faced with this alternative: shall we restore prospectors and thus assure getting more gold out of the ground in a shorter time, or shall we stick to our previous plan and continue to outlaw these people because they are not "socialized"?

It was reported at the time that the decision to restore prospectors was reached only after a prolonged debate,

covering a period of months and resulting in some bitterness. According to these reports, Stalin himself and his fellow-Georgian, Ordjonikidze, the Commissar of Heavy Industries, had swung the decision in favor of prospectors.

We know from Serebrovsky's book that Stalin had been fascinated by the possibilities of a Soviet gold rush similar to the California gold rush in 1849, not only for the gold itself but for colonization of the Soviet wide open spaces. There is no reason to believe that Stalin had any different views in 1933; he had been temporarily diverted from his original purpose, but was now ready to apply a scheme for a Soviet gold rush. And when this matter had been settled, and the scheme was ready to be applied, the Gold Trust was given independent status again, under Serebrovsky's direction.

To begin with, I was assigned to look into some mines which were not doing as well as they should. I spent the summer of 1933 in the Sayan Mountains of western Siberia, where some fine mines and cyanide plants had been equipped. Production was not considered fully satisfactory in this district, but the problems were by no means as serious as they had been in the Ural copper mines. By simplifying the systems of mining in use and insisting upon the improved care and operation of machinery, we were able within a very brief time to get excellent results.

Above all, I had a feeling of confidence in working with these people that they would carry on after I had left them to their own devices. Serebrovsky, being an engineer himself, had selected a managing staff with more attention to their technical training than some of the other Bolshevik executives. He was apparently a better judge of men, too; the number of wreckers in the gold industry

was always extremely small compared to other Soviet industries. There was all the difference in the world between the general attitude of both managers and workmen in the gold mines and those in the copper, lead, and zinc mines where I had been working since 1930. It did my heart good to get back among these gold people.

My own experience in Russia had covered at that time just about the same period as the life of the Gold Trust—five years. My knowledge of the Russian language was now sufficient for all practical purposes, and I had been given varied assignments, so that I thoroughly understood the organization and operation of Soviet industry. Serebrovsky decided to give me the title of Chief Production Inspector of the Gold Trust. In this capacity, I was expected to visit all groups of mines which appeared to need going-over, and diagnose what was wrong and prescribe the cure. A little later my title was changed to Deputy Chief Engineer of the Gold Trust, in charge of production. In this capacity I was the trouble-shooter for all the mines in the U.S.S.R.

In the late summer of 1933, I made my second visit to Lake Baikal, taking my wife along with me, and we spent the winter in that region. They have real winters in that part of the world, with the constant risk of frozen noses and cheeks when one ventures out of doors in the coldest weather, and the problems of mining in winter are considerable. But we were accustomed to cold in Alaska, and knew enough to take proper precautions, so that we got along all right.

I had first visited Irkutsk in the autumn of 1930, and was now impressed by the improvements which had been made in three years. The gold fields around Lake Baikal

have become some of the richest in the Soviet Union, probably in the world. One mine especially, which was discovered only in 1928, ranks among the world's leaders. It has been mechanized 100 per cent, and equipped with two large cyanide plants, fully equal to anything in the United States or Alaska. Power is supplied from a large modern steam turbine plant.

The Lake Baikal region had also been a gold mining center under the Tsarist Government, and mines were then operated with prison labor, including political exiles. But the discoveries of new deposits during and since 1928 have made this field much more important than it was before the Revolution, and the managers of the Gold Trust are specially proud, and justly so, of the modern little city they have built up in this district. It is entirely new, as there was not even a village on this site before. Now they had a good theater, brick schools sufficient for all the children in the place, and a good athletic stadium.

When I arrived in this promising center in 1933, the people there were behind their production schedule, largely because they had fallen behind in development work. We speeded up this work, with hearty co-operation from all concerned, and by the end of the year had managed to squeeze out the amount assigned to us, with an additional 1 per cent to spare.

To celebrate this victory, the Russian engineering staff arranged a banquet in one of the engineer's houses. For the previous two or three years, there had been a serious shortage of food in this district, as in other parts of Russia, and even the engineers and managers had been compelled to tighten their belts. But now the shortage was disappearing, and people were in a mood to eat heartily. On this

occasion we certainly did so. There were twenty-five of us present—engineers and their wives—and the women had made sure that none of us went away hungry. They not only had prepared dishes of many kinds of salads, meats and pastries, but they had made about three thousand *pilmenias* (the Russian equivalent of ravioli). They expected us to get away with about a hundred and twenty of these apiece. And naturally we had a few drinks so the fish courses could swim, as the Russians put it. We ate, danced, sang songs, and told stories until six o'clock in the morning, when some of us engineers had to go into the mines.

These Russian *pilmenias*, by the way, are the best food imaginable for a cold country where everyone has a samovar. Dough is rolled out thin, cut to the proper size and shape, and folded over a specially prepared ground meat. The *pilmenias* are then frozen, and when traveling through this country, one takes along a gunny-sack full of them together with the indispensable samovar. In any kind of weather it is possible to get the samovar boiling within ten minutes, then one drops in the number of *pilmenias* required, and in three or four minutes a hot meal is ready. The water in which the *pilmenias* are boiled makes a pretty good bouillon.

All through 1933, plans were being worked out and applied as rapidly as possible to put prospectors back at work, and regulations were being figured out to govern their relationships with the Gold Trust. An elaborate scheme, which was not enforced all at once, but gradually developed, began to set in motion a movement which might properly be described as a gold rush. The authorities took care that this gold rush should not get out of

hand, as those in California and Alaska had done, but should be closely watched and regulated at all times by the Government.

In order to supervise and control this gold rush, a new department was set up in the Gold Trust, called the Prospectors' Department, which was to be given charge not only of prospectors but of lessees, or concessionaries, who had also been restored to official favor. Notice was given out that men and women of all the Soviet races would be eligible to join in the search for gold, that this would be considered one of the most honorable occupations, and that prospectors and lessees would be richly rewarded for their services to the state.

There was a little hesitation at first about going into this work. The Soviet people were "gun shy," as you might say. They had seen small city traders invited to open their own retail stores under the New Economic Policy, and then, several years later, had seen these same people not only dispossessed of everything they had built up, but also disgraced and even sent off into exile. They had seen the small farmers known as kulaks first invited to "enrich themselves," to use the expression of one Communist leader, and then later deprived of their land-holdings and houses and sent off to work at forced labor in mines. Now they suspected some kind of Communist ruse.

But the old incentive of get-rich-quick began to exert its familiar pull. Veteran prospectors got back into their old work early, and were soon accumulating a lot of money. The Chinese inhabitants of Siberia and the Far East, who had combined gold prospecting and smuggling with illegal trading in the days prior to 1927, leaped at the chance to resume their former occupation. The Chi-

nese have never taken kindly to Communist theories, being too much interested in making money. They soon became some of the most successful prospectors and leaders.

Within a remarkably short time, the Gold Trust had several hundred thousand men and women working under the control of its Prospectors' Department. They quickly moved into the known areas, where they received marked-off claims, got credit from the Gold Trust for equipment and expenses during development work, and the technical assistance necessary to get them started. Meanwhile, more adventurous people were being encouraged to push farther afield, into remote areas which the Gold Trust had not mapped out or explored. These latter people had to register with the Trust to regularize their position, but they were free to prospect on their own account outside of the mapped areas, to carry such supplies and tools with them as were necessary, and to look for gold wherever they believed they could find it. The Gold Trust gave such prospectors a grub stake.

The Prospectors' Department put men into the field as inspectors to check constantly on explorations. Funds were made available to explore and map any new gold field which the prospectors opened up. If a field proved to be good, the Trust set up a local office, built a few houses, brought in a general store selling its goods only for gold, and invited other prospectors to come in and stake claims.

For exceptionally good districts, the Prospectors' Department began to recruit workers to serve both as prospectors and lessees. Families began to move in if prospectors were doing well, and after a sizable community

formed, the Gold Trust undertook to finance school buildings, motion picture theaters, and clubs.

Remuneration both for prospectors and lessees was deliberately designed to appeal to man's acquisitive instinct, unlike that in mines or factories. These people would have to live under extremely rough conditions for considerable periods in order to do their work, and the authorities had decided they could be attracted in sufficient numbers only by the offer of large material rewards.

As the system finally worked out, a lucky prospector in Soviet Russia can become rich overnight just as easily as he can in any other country. The Soviet prospector's rewards may not be quite so fabulous as those of other countries, but they were made attractive enough from the beginning to draw hundreds of thousands of persons into the work.

Under this scheme, which has been modified here and there but never substantially changed since it was introduced in 1933, Soviet prospectors work in groups of two or three or more, as they have done for centuries. The group is known as an artel, the same word used before the Revolution.

If a lone prospector, or an artel, finds a good unmapped deposit, the findings are reported to the Gold Trust. The Trust sends geologists to map the claim and study its possibilities. When the geologists' report is received, the lucky prospectors are rewarded up to a maximum of 30,000 gold rubles. This is a flat payment, made in a lump sum if desired, or in scrip or credits. In addition, the prospectors receive permission to work the outcroppings of the claims they have discovered for at least one year.

Prospectors and lessees are all paid for their gold in gold

rubles, not in the paper rubles which are used for all other transactions in Russia. These gold rubles are not an actual currency, but are represented by scrip or credits negotiable only in the chain of stores maintained by the Gold Trust throughout the gold-bearing regions.

These "gold stores" are one of the most ingenious features of the scheme, and probably have done a great deal to attract new prospectors. I suppose that they are the finest stores in rural Russia outside of the big city areas. They are always better stocked than ordinary Government stores in the same districts, and are more attractively operated. They will never accept paper rubles, the official currency of the country, but will exchange their desirable goods only for gold rubles, or scrip, which in turn can be obtained only in exchange for gold. When the scheme first started, this scrip was supposed to be non-transferable, and some prospectors got into trouble for selling their scrip. But later all bars were taken down, and today the scrip is a regular means of exchange in the gold-bearing districts.

Prices in the gold stores are based upon world prices. Comparison of "gold" prices with the prices of ordinary stores right next to them shows that one gold ruble is approximately equivalent in purchasing power to twenty paper rubles.

It is hardly an exaggeration to say that prospectors can, and many do, receive material compensation from the Soviet Government for one lucky strike which is the equivalent of about a hundred years of hard labor in factory, mine, or farm. One example will serve to show this. A group of three prospectors comes across a valuable lode or placer mine, and reports its find to the Gold Trust.

The geologist sent out by the Trust confirms the importance of the discovery, and the Trust approves payment to the finders of the maximum compensation of 30,000 gold rubles.

In addition, the group is entitled to work the outcroppings of their claim for a year. They should have no difficulty in averaging 15,000 gold rubles each. Since one gold ruble is equivalent in purchasing power to at least twenty paper rubles, this means that the prospectors get 300,000 paper rubles apiece for their discovery. According to Soviet official statistics, the average yearly wage of a skilled industrial worker is about three thousand paper rubles.

At the same time, the Gold Trust began to apply a scheme of concessions, or leases, which did as much or more than the revival of prospectors to colonize the empty spaces of Siberia, Kazakstan, and the Far East, and to increase gold production. The Trust leases certain areas, or claims, to groups of men and women who organize themselves into co-operatives for the purpose of working these areas for gold.

I have in mind one large co-operative which applied for and obtained mining privileges in a district near Lake Baikal. In this case, one energetic man apparently had rounded up about two hundred and fifty men and women, and gotten himself elected leader of their co-operative. He then went to the Gold Trust and made arrangements on behalf of the group for credit to buy equipment and to cover the costs of preliminary development before production could begin.

I visited the area staked out by the group after they had production well started, and found that ordinary mem-

bers of the group were averaging about six hundred gold rubles per month, which is the equivalent of 12,000 paper rubles. This means that these people were earning in one month about four times as much as a skilled miner could earn in a year.

It's not surprising that the word got around rapidly of the chances to make a fortune in the gold fields, and that within a very short time there were hundreds of such co-operatives as I have described busily working claims, and thousands of prospectors pushing always deeper into uninhabited regions.

The Gold Trust has worked out a whole series of schemes to keep prospectors and lessees under close supervision. It has its inspectors and geologists constantly in the field, moving from one area to another, looking over every claim to see that conditions are carried out. It trains its own engineers, who are available for hire by groups of lessees, to advise them how to operate their mines most efficiently and how to apply safety measures according to law. If they don't apply such measures, they are liable to heavy fines, and it is cheaper to play safe by hiring an engineer. These engineers usually are salaried employees, and it is rather curious that they, too, are paid in gold rubles, not in the regular paper currency of the country.

If concessionaries are engaged in placer mining, they dig out the gravel on their claims and wash it; if they are working with ore, they take it to the mill provided by the Gold Trust, and furnish all necessary labor to work the ore which they have brought. When they obtain the gold, they take it to one of the gold stores and turn it in, receiving scrip or credit.

This Soviet gold rush is not comparable to any other previous movement of the kind, because it has been at all times under such close control of the authorities. In the days previous to 1927, when the Soviet Government paid no attention to gold, I have been told that there was a great deal of crime and violence in the gold fields. There were smugglers all over the place, who acted also as gun-runners and brought in opium, as well as food and clothing from China and Manchuria during the periods of greatest shortage in Russia. There were hi-jackers operating then, too, lying in wait for the smugglers or prospectors and sometimes murdering them for their gold or smuggled goods.

I recall one incident in my own experience in 1928. I happened to reach one small gold mining town at a time when a group of three prospectors had arrived with a large amount of gold; at that time they had not yet been outlawed. They turned in their gold to the Government stores, and were given a large sum of money in return.

They went straight to the Government liquor shop and bought out the entire stock on hand. They loaded up with bottles of vodka, and went out into the single village street, solemnly setting down bottles of vodka a foot or so apart up and down both sides of the street, while the inhabitants looked on without understanding what was happening. Finally, after they had set out all their bottles, they shouted: "Come one, come all! Drink with us as much and as long as you can and will!" Before long the whole village was drunk.

The Gold Trust has now discouraged any such incidents. The "camp-follower" element, which ordinarily has been attracted to gold fields in the past, has not been per-

mitted to appear. The Gold Trust sells liquor in its own stores and restaurants, but no gamblers are permitted, and most of the women in the gold fields work alongside the men digging and washing gold. Prospectors, like other Soviet citizens, are on their best behavior, and are likely to find themselves in trouble if they become too noisy or rough. Repeated offenses usually result in expulsion from the gold fields and black listing which prevents the offenders from getting further work as prospectors or lessees.

I have traveled thousands of miles through gold mining areas since the present system of prospecting and leasing was installed in 1933, and my wife has accompanied me on many of my trips. I have never carried any sort of weapon and have often gone into camps entirely by myself. Soviet prospectors, like those in most other countries, are extremely hospitable, offering their food and drink freely to such strangers as myself.

The Soviet gold rush scheme was instituted at a time when relations between Russia and Japan were particularly acute, and when it was important for Russia to fill up the empty spaces in her Far Eastern regions as quickly as possible with a population which was reasonably satisfied with conditions. The authorities in this same year of 1933 made a variety of concessions to small farmers in the eastern regions, including Siberia, which put them on about the same plane as the kulaks who had been punished so severely a few years before. When it became a choice between expediency and socialist principles, the Communist authorities decided for the measures which seemed practical. The threat from Japan made them more disposed to compromise with their theories.

And the gold rush proved to be a pronounced success. The push to the east and to the south into Kazakstan has continued without any interruptions. An army of intrepid men and women has pushed ever farther into the unexplored wastes of eastern Siberia, the Altai Mountains, and the northern province of Yakutsk. Prospectors work in blinding blizzards and tropical heat, and penetrate into districts which have perhaps never before been visited by white men. These prospectors are men and women of all the Soviet races—Russians, Ukrainians, Georgians, Mongols, Chinese, Koreans, Kazaks, Kirghizians, Armenians, and Arctic and Central Asian tribesmen.

Whether or not they can read or write, or whether they have ever traveled beyond their own isolated districts, these men and women have equality of opportunity to make an overnight fortune. Their chances vary only according to their luck, stamina, and courage.

XII. EXILES UNDER SOVIETISM

DURING my whole period of employment in Russia, I kept on good terms with the authorities by showing no curiosity about matters which did not immediately concern me. I had been hired to apply modern methods to the Soviet mining industry, and I stuck to that job. I never went out of my way to gather information about such subjects as concentration camps, the exile system, and forced labor, although I spent a large part of my time in regions to which political and other offenders were sent. But forced labor and exile play such an important part in the Soviet system that anyone who works in Russia as long as I did learns a lot about them.

I have already described how the small farmers known as kulaks were put to work in the mines and in other Soviet industries after the authorities had decided to remove them from the land and confiscate their houses and other personal possessions. In some mines I was assigned the task of teaching these people the processes of mining, and found them fairly apt pupils. They went through a miserable, disagreeable period which some of them didn't survive, but those who did come through settled down after a time to their new life. If their luck was in, they were sent to mines or forest areas where the management was competent and living conditions were reasonably pleasant, and in that case they didn't fare so badly. But those who had the bad luck to be sent to enterprises which

were poorly managed or were located in regions most seriously affected by the food shortage went through a hard period. They were not free agents, and could not pick up and leave when conditions became almost unbearable, as thousands of free workmen did during this period. The labor turnover became terrific at times, and the hundreds of thousands of small farmers and others who had to stay on the job wherever it was, proved to be a real boon to Soviet industries, and to mining especially.

I have never considered it my business to pass judgment on actions taken by the Soviet authorities; they undoubtedly considered themselves fully justified in confiscating the property of these small farmers and putting them at forced labor; they certainly never made any effort to conceal their actions. The Communist authorities always picture themselves, in their own minds, as organizers of a new world; having this conception of themselves, they can justify whatever suffering they may cause to any group which threatens to get into the way of their numerous reforms.

But I did feel they went too far in persecuting these small farmers and their families for years after they were liquidated. It didn't seem a sensible thing to do from any point of view. For some years, the authorities refused to allow the children of these small farmers to attend higher schools; they removed the bars in this respect only in 1936. And in petty disputes of any kind, whether in court or not, a kulak or the relative of a kulak was likely to get the worst of it; judges were instructed to take into account whether or not a kulak was involved, and give the other

man the benefit of every doubt. That attitude was very common up to the time I left Russia in August, 1937.

The authorities use forced labor consisting not only of small farmers, but also of every other group which has been broken up because it was considered socially undesirable. In the mines, I had former priests and Mohammedan holy men working for me on more than one occasion. Some of them turned out to be excellent miners. The Mohammedan *mullahs* tried to obstruct the breaking up of the old social organization of the nomads; they naturally did not like the Communist drives against religions of all kinds, and tried to keep the people in the mosques. So the authorities rounded them up and put them to work in the mines or at digging canals or building railways or cutting timber in the northern forests.

As a rule, forced laborers are shipped to some part of the country as far as possible from their old homes. This is supposed to reduce their temptation to run away; it also cuts off all their old ties, and thus makes them more disposed to accept the new life laid down for them. I have seen Central Asian tribes at work in the far north, and the southern Asiatic regions have been filled up with people from European Russia who didn't come of their own free will.

During the first years after 1929, when the whole country was in an uproar from so many social upheavals occurring simultaneously, forced laborers were treated worse than they were later. The police simply couldn't cope with the problem of handling so many people at once, and it took years to build up an efficient organization. Thousands of them didn't have decent quarters to live in, or sufficient food. But this wasn't deliberate, as I see it; the

police simply were given more to do than they could handle properly. Later, the forced labor camps became better organized, and those I have observed in recent years were orderly and reasonably comfortable. They had schools and cinema theatres, and the inmates didn't live a very different life from ordinary Soviet citizens.

The authorities have never given out figures of the total number of men and women put to forced labor; I have heard the number estimated at anywhere from one to five millions. Thousands of the small farmers rounded up during and after 1929 have since regained their freedom, but so far as I could see the number of forced laborers remained fairly constant up to the time I left Russia in 1937. The recent purges, which affected hundreds of thousands of persons, undoubtedly added to the labor army.

Ordinary criminals, such as murderers and thieves, are mixed up indiscriminately in forced labor camps with members of the various disfavored groups such as the kulaks, nomads, ex-priests, and the like. In fact, the authorities seem to have a more friendly feeling for ordinary criminals than for social groups which have opposed their various reforms. They treat a brutal murderer, as a rule, with more consideration than a small farmer who didn't want to turn his domestic animals and house and garden into a common pool with his neighbors to make a collective farm.

In the winter of 1936, when my wife and I were making a trip by automobile into Yakutsk, the great northeastern province of Russia, our car ran into a ditch soon after crossing the trans-Siberian railway. We had observed large groups of men under guard working on the double-track-

ing of the railway, and decided to go back to ask some of them to help us put our automobile back on the road. We had run across many such groups in our travels through the Far East; great gangs of these laborers have been working on the railways being built out there for many years.

When we got back to the railway, there was no guard in sight anywhere; in this isolated country, prisoners could hardly get far off if they wanted to. These men were dressed in ordinary Soviet working clothes, and there was nothing to show they were prisoners, except that they were perhaps a little more ragged than the average worker. We asked them if they would help us out, and they readily agreed.

What struck us most about these people, and those like them whom we have seen elsewhere, was that they did not appear to be what we would call criminal types. It is probable that most of them were not criminals, in our sense of that word; they were rather members of social groups who had failed to co-operate with the authorities in their various schemes for reform.

I was told that political prisoners, including members of other revolutionary groups and disgruntled or disgraced Communists, are seldom if ever put into such prison camps or gangs. If they are considered dangerous, they are confined in concentration camps or isolated prisons. If they are considered merely a nuisance, they are given what is called free exile. But since the recent purges, which were directed chiefly against Communists, this practice may have been altered. There were rumors before I left Russia that disgraced Communists would now be used for forced labor just like the other refractory groups.

I found that almost all Russians are remarkably wary in

discussing concentration camps and prisons. The authorities have succeeded in surrounding this subject with such an atmosphere of mystery and fear that even the subject is avoided. I met a few Russians who seemed disposed to bring up the subject of prisons, but one never knows whether or not such people are police agents, and I gave them no encouragement, since in any case it was none of my affair.

I have seen some of the isolated prisons at a distance. One such place, which was used for political prisoners under the Tsarist régime, was pointed out to me as the present place of confinement for Dora Kaplan, the woman who shot Lenin. But I never saw the inside of any such place, and so far as I know no other foreigner has been conducted through either a prison for political offenders or a concentration camp for the same class of people. Of course, I am not referring here to the model prisons which receive a steady stream of tourist visitors. The inmates of such places are merely murderers, or thieves, not political offenders.

The "free exile" system is uniquely Russian; it is practiced today in very much the same forms as before the Revolution. I encountered free exiles almost everywhere I worked in Siberia, Kazakstan, and the Far East. I have heard it said that one can meet more former aristocrats and well-to-do people in the Central Asian cities than in Leningrad, the former captial of the Tsars.

Free exile is a comparatively mild punishment. These people can hardly be distinguished from other residents; they move about as they please within certain limits, and usually have regular work. They have been given a "minus," to use the Russian description. Say, for example,

that some petty political offender is given a "minus six." This is a very common penalty; the political police seem to give it out to anyone even faintly suspected of disloyalty to the régime. The man or woman with a "minus six" cannot live in or visit the six principal cities of European Russia for a number of years.

I came across some fairly distinguished exiles working in remote mining towns in Asiatic Russia. Usually they were doing routine work, such as bookkeeping; it is not easy for them to get responsible work, and most of them would not take it even if it were offered to them, since they would be held to account if anything went wrong. The Soviet police, like police in other countries, round up the most obvious suspects whenever anything goes wrong, and exiles are pretty obvious. Those I knew were very quiet and inoffensive; they usually had a melancholy air, being separated usually from the people and kind of life they had known before.

But in general I believe the horrors of the exile system have been exaggerated. Before the Revolution, according to all accounts, it was pretty terrible. Forced laborers in those days, including exiles, were kept in leg-irons, which is never the case today. The present authorities do not use leg-irons, handcuffs, or uniforms for prisoners in any case which is known to me. But even before the Revolution, according to the books which I have read on the subject, most political exiles were allowed a considerable degree of freedom, similar to that of the free exiles today. If they proved tractable, even in Tsarist days they were allowed to take jobs to eke out their pittance from the Government, and they boarded with small farmers in the cities, towns, or villages of Siberia, and visited among themselves.

Some of them even were friendly with Tsarist officials and paid visits back and forth, according to accounts of those days which seem to be reliable. I have never seen evidence of any friendliness between Soviet officials and exiles.

However, when one reads books written by exiles either before or since the Revolution it becomes apparent that exile is a terrible ordeal to the persons concerned. Why is this? Well, in the first place, no human being enjoys being sent off in disgrace, separated from his family, friends, and old associations, compelled to live for years in some distant part of the country doing routine work for a bare pittance. And that is a fair description of the life of an average free exile in Russia today.

There is another reason, too, it seems to me. Exiles for the most part are city people; the dispossessed small farmers were not exiled but put to forced labor. These city dwellers, not being accustomed to existence in undeveloped, isolated country, are naturally unhappy. When I read Leon Trotsky's description of his periods of exile, for example, I didn't feel any sympathy for him, although it was clear that he felt very much abused because he missed the city's bright lights and political maneuvers. For myself, I would rather live in the places he was living in than modern cities, and for that reason I couldn't feel sorry for him.

The word "exile," and all its implications, arouses a sense of horror in the minds of Americans which I am convinced is seldom felt so keenly by Soviet citizens. The latter are so accustomed to being knocked about by their own authorities, under this as well as previous régimes, that they accept as a matter of course treatment which Americans

would heartily resent. A friend of mine had an experience with a Russian family which throws light on this state of mind. The family had a daughter about nineteen years old, who sometimes spoke out rather critically about the Government. An old lady who posed as a friend of the family one day heard her talking, and reported her to the police. The police visited the family's apartment in the middle of the night, as they usually do in such cases, and took away the girl and a diary she had kept from the age of fifteen.

The girl was kept for two months in the Moscow prison for political suspects, during which time her family was not permitted to communicate with her. At the end of that period, the mother was called in and told she could talk with her daughter for twenty minutes. The girl told her the police had decided she had "counter-revolutionary moods," and would therefore be exiled for two years. My friend, talking to the mother, asked: "And what do you think of such treatment?" The mother replied earnestly: "Oh, we are very much pleased because our daughter received only two years of free exile; she might have been sent to a concentration camp."

As a matter of fact, there is not a great deal of difference, so far as I could observe, between the treatment accorded to those in free exile and those who are presumably entirely free. From the American viewpoint, all Soviet citizens are treated very much like prisoners on parole, especially since the old Tsarist passport system was revived in 1932. Every citizen must have a passport and register it with the police at regular intervals; he must show his "documents" whenever he turns around. He has to get special permission to travel from one part of the

country to another, and register with the police wherever he goes. He must have a very special standing with the authorities to get permission to leave his country; only a few hundred get such permission every year.

An American friend told me about a conversation with one of his Russian employees. He happened to mention that he had never taken out an American passport until he was twenty-five years old and wanted to make a trip abroad. The Russian looked amazed. "Do you mean to say you never had to take out a passport until you wanted to go abroad?" he asked. The American nodded. The Russian seemed puzzled. "I can't understand," he said. "If you didn't have a passport, how did the police keep track of you?"

Practically speaking, there's not much difference between the Soviet citizen sentenced to free exile and the citizen who is refused a residence permit in the larger cities of European Russia. The former knows that he cannot visit or live in certain cities, and this may be a very severe hardship upon him if his family lives in one of these cities. Husbands and wives, parents and children, are often separated for years as a result of this system. But the same is true, to a lesser degree, by the working of the passport system, which enables the authorities to refuse permission to any citizen to live in overcrowded cities. I have known them to refuse permission to a husband or wife to join the rest of the family in a city on the grounds that there was no more room.

In any case, if family ties are strong enough, a husband or wife will follow the other into exile or will rejoin each other in the provinces if it is impossible for both to get permission to live in some desirable city. The authorities

never refuse permission to leave cities, although an official might lose standing in the bureaucracy if he left responsible work where he could not easily be replaced merely for the sake of having his family with him.

The officials have become callous in this respect, at least from our viewpoint. A friend of mine told me about a former aristocrat who was arrested during a general round-up of suspects at Leningrad in 1934. He was held in prison for a couple of months, and then the police said they could find nothing against him, and let him go. He returned to his apartment, looking for his wife, from whom he had heard nothing all this time.

The apartment was empty, and his wife was nowhere to be found. Someone had broken into his apartment while he was in prison and taken off most of his personal possessions. That didn't bother him so much, but he was very fond of his wife and gave up his whole time to the search for her. He could get no clue in Leningrad, and finally came to Moscow, where he learned that she had been exiled to Central Asia. He immediately telegraphed to her that he was joining her as soon as possible, and started making preparations for the trip.

A Soviet official heard somehow what the man was planning to do, and called him into his office. "Apparently you have misunderstood the situation," said the official. "The police have cleared you, and you will have no further trouble. You have a good job waiting for you either at Leningrad or here in Moscow. You have done good work for us in the past, and we will see that you get ahead. Under the circumstances, there is no need for you to go to Central Asia."

"But my wife is there," replied the Leningrad resident.

"She was exiled, and cannot get permission to return to European Russia for several years. She is not in good health, and I am concerned about her. She needs someone to look after her, and I will have to go to her."

The Soviet official shook his head. "In my opinion, you are very foolish, my friend," he said. "Your wife has been branded with the mark of an exile, while you have been entirely cleared. You will lose your own favorable position with the authorities if you rejoin her now, and will never get ahead so long as you stick to her. It is better for you to break with the past once and for all."

The Leningrad man replied quietly: "My wife means more to me than my career, or a favorable status with the authorities."

The official shrugged his shoulders. "In that case, you are not the man we had believed," he said. "Go to Central Asia, by all means."

XIII. RUSSIA'S GREATEST ASSET

THE worst thing about the Russian exile system, so far as I am concerned, is the bad reputation it has given to Siberia. Before I went to Russia, I had an idea that Siberia was a gloomy sort of place, a land of everlasting cold and darkness. Why did I have this idea? Because most of what I had read about Siberia was connected with the exile system, which has used Siberia as a dumping ground for criminals and political undesirables both before and since the Russian Revolution.

Of course, I should have known better. Books have been written both before and since the Revolution to show what a fine place Siberia is. But the connection between Siberia and exiles had stuck in my mind above everything else I read about this part of the world, and I suspect that many other Americans still have the same attitude.

If anyone should ask me what I think is the most hopeful thing about Russia, I should reply at once and without any hesitation: "Siberia!" Politicians and reformers like to give themselves the credit for everything good that happens in a country; in that respect, the Russian Communists are no different from people of the same kind in our country. To read their speeches, you would think that nobody had ever done anything for Russia's benefit until they came along, and that their political system and social reforms were the source from which all blessings flow today

and forever more. But that doesn't mean a sensible man has to take their claims seriously.

A large number of young Russians are convinced that they have the finest and most powerful country in the world, and if you ask them why they think this, they usually will make the automatic response which they have been taught from childhood: "Because we have Bolshevism." When I got such replies, I just smiled and kept still. But if any young Russian had replied: "Because we have Siberia," I would have patted him on the back and told him he was probably right.

For myself, I would certainly rate Siberia as far more important than Bolshevism in any estimate of Russia's future. So long as the Russians hang on to Siberia, they don't need to worry about what social and political system operates in their country. They can even afford to give up a large part of European Russia, although this includes many extremely valuable and rich regions; retreat back into the Urals and Siberia, and still consider themselves one of the largest, richest and most promising countries in the world.

I have traveled back and forth and up and down across Siberia dozens of times during the past ten years, and I will stake my reputation on the claim that Siberia under proper management can be made superior to any other country in Europe or Asia, and could give the United States a run for its money.

I am using the name Siberia here in the old sense, which is still used by most of the Soviet citizens who live there, even if the present authorities have divided up the old territory into several parts with new names. According to this interpretation, Siberia includes that region beginning

a hundred miles east of the Ural Mountains and extending to the Pacific coast, as well as the Lake Baikal region and the maritime provinces taken over from China in the middle of the nineteenth century. This Siberia extends to the Arctic seas on the north and as far south as the Central Asian republics, so that its southern regions are almost tropical.

The present authorities in Russia have opened up Siberia to a tremendous extent during the past ten or eleven years, and I feel that I have played my own small part in this process, since the Gold Trust was created, among other reasons, for the purpose of inducing colonists to settle in Siberia. Stalin wanted the gold, too, and understood how it could be useful to the Soviet Government, according to Serebrovsky's story, but he looked at the matter from the viewpoint of an empire builder.

When I made by first trip through Siberia, and saw how badly mistaken I had been in my own mind about the nature of the country, I decided I must be unusually dumb. But I have learned since that Americans have been visiting Siberia for a long time, and that each new arrival, not profiting by the written impressions of his predecessors, makes the fresh discovery for himself that Siberia is not an Arctic waste such as he had imagined, but a great country more like the American Middle West and Northwest than any other stretch of the earth's surface with which I am familiar.

More than half a century ago, in 1885, an American writer named George Kennan went to Siberia to investigate the Tsarist exile system. He wrote a two-volume book, a careful, thorough record of his discoveries, and in this book he succeeded as well as could be expected in

making the size and position of Siberia clear to his American readers.

After explaining that Siberia is about twenty-five hundred miles wide and five thousand miles up and down the map, Kennan continued: "If it were possible to move entire countries from one part of the globe to another, you could take the whole United States of America from Maine to California and from Lake Superior to the Gulf of Mexico, and set it down in the middle of Siberia, without touching anywhere the boundaries of the latter territory. You could then take Alaska and all the states of Europe, with the single exception of Russia, and fit them into the remaining margin like the pieces of a dissected map; and after having thus accommodated all of the United states, including Alaska, and all of Europe, excepting Russia, you would still have more than 300,000 square miles of Siberian territory to spare—or, in other words, you will still leave unoccupied in Siberia an area half as large again as the empire of Germany."

Fourteen years after Kennan made his trip, another American named John W. Bookwalter, a businessman from Springfield, Ohio, heard that the Russians were building a transcontinental railroad to the Pacific Ocean; and as he was a curious-minded sort of fellow, he went off in 1899 to have a look at it. Bookwalter apparently had read considerably, but he had missed Kennan's book about Siberia. So he arrived there, as I did, and as most Americans apparently still do today, with fanciful notions about the nature of the country.

Bookwalter recorded his impressions in a book which he published himself and circulated privately in 1899. An American friend of mine dug up a copy of this book in

a second-hand bookstore in Moscow, and it makes extremely interesting reading to an American like myself who has seen something of present-day Siberia. Bookwalter wrote:

"Somehow I had formed the idea that Siberia was, in the main, a mountainous, broken, barren, and even sterile country, covered with forests—which opinion, I am inclined to think, is somehow generally entertained in the West. Nothing could be farther from the fact. Of all the surprises met with in my somewhat extensive travels, Siberia is the greatest."

I can heartily echo those words, written by another western American thirty years before I laid eyes on Siberia. I was just as much astonished about what I saw in my turn as Kennan and Bookwalter had been in theirs. But we all came to the same conclusions, even though our visits to Siberia extended over fifty years and my visit occurred after another régime had taken over control in Russia.

Bookwalter wrote a description of the similarities between Siberia and some of the western sections of the United States which are just as good today as when he wrote them: "There lies in western Siberia, from the Ural Mountains eastward, an unbroken tract of practically level land, about eight hundred miles wide and nearly two thousand miles long; that is to say, an area equal to two-thirds of the United States, excepting Alaska. When I add that for the most part it is like or even superior to the fertile, treeless, level prairies of our own great West; that it extends over thirty degrees of latitude from the genial climate of Central Asia to the frigid north; that throughout this vast region is to be found the finest pastureage in the world; that in many parts wheat and other

cereals can be grown equal to the Dakotas or Minnesota, and even Indian corn over a large section in the south—some feeble conception can be formed of the tremendous latent agricultural resources of this country."

Even in 1885, when Kennan visited Siberia, that American was agreeably surprised by what the Russians were doing there. He was chiefly interested in the exile system, and was particularly distressed by the treatment of political offenders, but aside from the prisons and cruel system of "forwarding stations" for prisoners and political exiles, Kennan was favorably impressed by Russian activity in Siberia.

When Bookwalter came along in 1899, however, the Russians had roused to much greater activity in Siberia. They had laid out the great trans-Siberian railway a few years before and were in the process of building it. This American visitor's description of what was happening in Siberia along the railway reads like some New York Communist's enthusiastic account of today. For example:

"All along the route of the Siberian railway are to be found those examples of quick settlement of country and sudden growth of towns so familiar in Iowa, Kansas, and Nebraska in the early days of the extension of railways through those states. Every few miles a station is located on the open plains or prairies, around which there quickly clusters a thriving village. Fields of newly cultivated lands, many covered with a golden harvest, can be seen for miles at all these stations.

"There are some instances of rapid growth not surpassed in our own great West. After crossing the Obi River, we stopped at a town called Obb, of over fourteen thousand inhabitants, containing many handsome build-

ings and several beautiful church edifices. It was a flourishing community and the seat of an active trade. I was told that less than three years ago there was not a house existing where the town now stands, and, indeed, that the whole country around was one of wild solitude and desolation."

Bookwalter then took a look into the future, and his observations prove so sound in the light of subsequent events that they give added confidence in his good judgment. He wrote: "For the whole of Siberia, there is less than one person to the square mile. This country lies practically between the same degrees of latitude as European Russia, and has an area much greater and an average fertility of soil even superior in many places. The latter country already supports over one hundred millions of people, with a liberal surplus. This will give some notion of the teeming millions that are yet to people this waste land, when it is made available by an adequate railway system and other means of intercommunication and transportation, which, under the newly awakened spirit of Russian enterprise, seems destined to be accomplished in due time."

But there was one passage in Bookwalter's book which interested me more than any other, because it coincides with my own view today. It also showed that it is rather foolish to pay too much attention to the political system which happens to be current in a country at a given time. That has been the trouble with many books written about Russia both before and since the Revolution. By way of contrast, it is a pleasure to find an observer with the sound common sense of Bookwalter. Here is what Bookwalter wrote in 1899:

"The one great national characteristic of Russia seems to be foresight. She deals not so much with the present as the future, not with the proximate so much as with the remote and ultimate. . . . No doubt it was this penetrating foresight that caused her, long ago, to devise her policy of territorial acquisition, under which she laid aside for future use such vast, accessible, and contiguous areas of country which to the rest of the world then seemed useless.

"The pressure of a redundant population always has been, and perhaps will remain, the chief peril threatening the stability of every nation. This danger becomes intensified when a nation, by conquests or ill-ordered fiscal policies, develops its commercial, manufacturing, and urban population at the expense of rural life. . . .

"The acquisition of Siberia and Central Asia, a practically uninhabited and contiguous country, having over seven million square miles with less than twelve million inhabitants, was, no doubt, the result of Russian foresight to secure, near at home, and adjacent, a suitable reservoir into which to pour her future and increasing surplus population, providing thereby for centuries a safety valve for her empire.

"This lies at the very bottom of her settlement and development of Siberia and the Central Asian provinces, reserving them as she does for the steadily increasing future necessities of the older portions of her empire, rather than following the example of other nations who, by rapid development of new territory, quickened into an undue, intense and transient life other subsidiary and dependent interests and industries."

These words would be read with surprise and some be-

wilderment by present-day young Russians, who have been given the impression that officialdom before the coming of the present régime was completely stupid. It may be that Bookwalter gives Tsarist officialdom too much credit, and that the acquisition and retention of Siberia as a reservoir for future generations of Russians was more accidental than deliberate. However that may be, it is a fact that the old Tsarist régime bequeathed this vast territory intact to the present rulers of Russia, a rich undeveloped area the size of a continent, with continental variety of climate and natural resources. The new régime, like the old one, has persisted in using Siberia as a dumping ground for political and other undesirables, but at the same time, they recognize that it is Siberia which makes it possible for them to devise tremendous plans for development in their country with a fair chance of carrying them out.

For a long time after the Revolution, it was the fashion in Russia to run down everything which had happened in the country prior to 1917, as well as all the men who had anything to do with affairs under the Tsarist régime. But lately the men in power have been gradually changing their tune, and the authorities have been publicly reprimanding, and even arresting and exiling, Communist spokesmen who keep on shouting about the old degenerate Russia. Many onlookers have commented upon the appearance of such ideas as "Soviet patriotism" and "Soviet fatherland." The school histories have begun to praise the achievements of such Russian empire-builders as Peter the Great.

The more I read about Stalin and the men associated with him, and the more I saw what they were doing in

Siberia and similar regions, the more I suspected that they were not altogether unappreciative of the inheritance left to them by the Tsarist régime, and that they fully understood what possession of this vast continental country of Siberia means to Russia.

The Gold Trust, which Serebrovsky has told us was the creature of Stalin's imagination, has been used from the beginning, as I see it, primarily as an instrument to lay the foundations for wide-scale development of Siberia and the whole Soviet eastern and southeastern regions. A disproportionate amount of Russia's limited capital was poured into it for a period of years because the authorities pictured it as the forerunner of other colonizing and "civilizing" agencies in the Middle and Far East.

On the basis of pure profit-and-loss, I suppose that the Gold Trust was a heavy loser for years, at least before the United States obligingly raised the price of gold. But the men in charge weren't concerned about immediate profits because they had inherited that "Russian characteristic of foresight," which Bookwalter noted in 1899. In this case the foresight was directed toward Japan, which was showing signs of eruption in the Far East, after a period of calm.

The Japanese, as anyone who reads even a little about their history finds out, have had in their minds for more than a century the prospect of carving out an empire for themselves on the Asiatic mainland. They debated among themselves about where to begin this empire; they knew what they wanted but they had to consider what they could get. Most of them seemed to be of the opinion that they could grab more territory with less trouble in the Russian Far East than in China, because in the first place

the Russian regions were very sparsely settled, and in the second place because Russia was such a huge country, with ample resources elsewhere.

When the European war came along, the Japanese felt that their moment had struck. Here was a golden opportunity to grab while the grabbing was good. They wasted no time in taking over those parts of Shantung which had been occupied by the Germans, because they knew the war-ridden European nations could hardly kick much about that. Then, in 1915, they figured out their "Twenty-One Demands," the famous ultimatum presented to the Chinese Government which would have given Japan almost as much control over Chinese affairs as they have today. They had to modify these demands because of the United States, which hadn't yet gone into the European war, and still was able to arouse a lot of fear among the Japanese.

Then the Russian Revolution came along in 1917, and the Japanese tried to make the most of this opportunity. They poured troops into the Russian Far East, and would probably have taken over the territory permanently if the United States and Great Britain had not blocked their game. It can't exactly be credited to "Russian foresight" that the Russian Far East was saved at this time for Bolshevism. That was a gift from the two Anglo-Saxon nations, who were not so much interested in protecting Russia as in restraining Japan.

With one kind of help and another, the present régime in Russia succeeded in getting the Japanese out of their territory by the end of 1922, and even in holding on to the former Russian perquisites in North Manchuria, Outer Mongolia, and Sinkiang (Chinese Turkestan). But along

about 1927, the Japanese began pressing hard again against Russia's Far Eastern borders, and the Soviet general staff in Moscow could see the way things were going.

The Gold Trust, organized at that time, was merely one of a number of instruments designed to strengthen Russia's position in its own Far Eastern regions; or at least, that is the way I see the matter. In the next chapter, I shall describe how the Gold Trust is organized, and its functions as a colonizing agency will become more apparent. An even more powerful agency for the same purpose, of course, was the independent Red Army in the Far East, which brought hundreds of thousands of active young men into the region, and imbued them with a sense of patriotism and a love of pioneering life which induced many of them later to settle in Siberia.

It seems to be obvious by now that the Russians looked far enough ahead and acted soon enough to hold off Japanese designs upon their Far Eastern possessions until a better opportunity opened up to the south in China, and the Japanese attention was all diverted in that direction.

The last decade has not been an easy period for the Russian authorities, and it may have been a temptation at times to let some of their Far Eastern districts go to the Japanese without a struggle. They may have felt often that they could use their limited capital to better purpose in other parts of their huge country. They are trying to hold Siberia for future generations, having inherited it from a previous generation which acquired it for that purpose, deliberately or otherwise.

It may be added that this land is all "sewed up" for the present and future generations of Russians beyond any possibility of loss, so long as the present system of

land control maintains in Russia. The state owns all the land, and will lease it only temporarily to those who actually work it. There will be no land grabs in Russia under this system such as marred the development of the western regions of the United States.

And the Soviet régime, in spite of its professions of interest in the welfare of all mankind, is by no means so generous with its great unsettled regions in Siberia and elsewhere as the United States was for so many decades. Immigration into Russia today is so rigidly controlled that no more than a few hundreds come in during a year, and the bars are going higher instead of being let down. Very few poor European immigrants are going into Russia to settle on the last remaining wide open spaces of the earth's surface.

So the Russians, Tsarist officialdom and Soviet officialdom alike, have kept and are keeping Siberia as a great reservoir for future generations of their own countrymen. I have seen with my own eyes the agricultural, forest, and mineral riches of Siberia and the other unsettled regions of Russia. I can testify that they are sufficient to ensure prosperity for all Russians, if they are properly exploited and managed.

XIV. A MODEL SOVIET TRUST

THE Soviet Gold Trust has stood at the head of all industry in Russia for several years, having the best record in such matters as planned production, labor costs, full use of capital investments, and so on. It has consistently fulfilled its plans, worked more efficiently than most other Soviet enterprises, and has conceived and worked out some of the practical details of schemes which were copied throughout Soviet industry. In general, this trust has served as a model and a pioneer, not only in opening up new regions and mines but also in blazing new trails for organization of state-controlled industry.

Since I occupied executive positions in this trust over a period of almost ten years, not only in the main office at Moscow but also in separate groups of mines and smelters, I was in a very good position to follow the evolution of Soviet industrial organization.

When I arrived in Russia in the spring of 1928, large-scale industrial development was just getting fairly under way. During the course of the next ten years, I watched the Soviet leaders work out, by the method of trial and error, the type-organization which has now been applied to every branch of their industry. I played my own small part in this process, since the Gold Trust turned out to be in some respects a sort of laboratory for Soviet industry, perhaps without any conscious purpose of that sort.

Someone has aptly remarked that Russian Communists,

like other reformers, have been "hampered by a formula." They started out with some theories, laid down by their Communist prophets almost a hundred years ago, when industrial and other conditions were very different, and assumed that these theories are good forever. They stubbornly hung on to them long after it should have been obvious to a smart twelve-year-old that they didn't make sense.

I have already mentioned some of these theories: one was that costs didn't matter under the Soviet system, because high costs in one enterprise would be offset by low costs in another. A second theory was that it was improper to get more work out of men and women by giving them incentives to work harder through piece-work and contract labor devices. A third idea was that it was wrong to appeal in any way to the acquisitive sense of the individual, since such appeals would retard the coming of socialism.

As the years went by, I watched some of these fantastic notions go by the board. The Gold Trust did more than its share toward relieving Soviet industry of the handicaps set up by theories which lacked common sense. Our chief executive had more courage than most men, and did not hesitate to stand up against the doctrinaires in Communist headquarters. And he was able to win the support of Stalin and of Ordjonikidze, who was the nominal chief of the Gold Trust.

But with all our advantages, and the confidence given us by the knowledge that we were a favored enterprise from the beginning, and could count on help from the highest quarters in an emergency, we had to go very slow in introducing any measures which seemed to disagree

with the exploded theories of nineteenth century Communists. In the matter of piece-work, for example, I was completely blocked when I tried to introduce it in gold mines in 1928. But we kept on trying, and in 1929 got permission to try out a modified system of contract labor in development work in the mines at Kochkar. We had to apply it cautiously, in the face of stubborn opposition and persistent adverse criticism, and were unable to extend it to development work until 1935, when the so-called Stakhanoff movement overwhelmed the opposition.

When we finally got the system going, and it began to stimulate a sharp increase in production and corresponding drop in labor costs, as any sensible person could have foreseen it would do, other Communist managers began to take it up in their own enterprises, although some of them held back a long time, and never did seem to care for the idea.

The Gold Trust was one of the first to take the shape assumed by most Soviet industrial trusts today. The type of organization we worked out, modified and helped, of course, by improvements introduced in other branches of industry, is now so general in Russia that it is not difficult for a man to pass from one branch of Soviet industry to another of an entirely different sort, since the organization is everywhere almost the same. By describing the Gold Trust, I can therefore give a good idea of the whole of Soviet industrial organization.

However, it is necessary to bear in mind that the Gold Trust is still in the "vanguard," as the Russians like to say. Its organization is more simple and clear-cut than that of some more backward industries.

I am reminded of a talk I once had with an American

who had been studying the collective-farm system in Russia. He told me he had visited dozens of farms in different parts of the country, and was still in the dark about just what the system was driving at, until he went to the German Volga Republic, where the population consists largely of German colonists who have lived in Russia since the days of Catherine the Great. One of these Germans took him around for a couple of days showing him the collective-farm system, and before those two days had ended a great light had dawned upon my American friend. He realized for the first time not only the principles behind the collective-farm movement but also how effectively they might be applied. Although he had previously decided that the system was a complete flop, he emerged from the German Volga Republic almost an enthusiast.

The point is that these Germans had thoroughly grasped the principles behind the collective-farm system, and could make the system clear to the newcomer at a glance; whereas the people my American acquaintance had been dealing with in other parts of Russia probably never had obtained a clear conception of the principles, and naturally could not explain them to others or apply them properly. I am convinced from my own experience that many industrial executives in Russia are equally ignorant of the principles which are supposed to underlie industrial organization, and try to enlighten themselves by reading a lot of nonsense written by impractical theorists in the nineteenth century.

This has been the result of putting modernized and mechanized industry into the hands of Communist managers without any industrial experience or any real interest

in industrial organization. It is not surprising that industries have often broken down under such managers, or that some of the latter have turned to conspiracy when they decided that the Revolution was being "betrayed" by the substitution of common sense for exploded theories.

I must say that while I took no sides in the Communist internal political disputes, I never had any sympathy for people who talk about "betrayals" in Russia. My experience there was almost entirely in industry, and in one branch of industry, mining. But, as a completely disinterested engineer, my indignation was aroused chiefly against those who deliberately wrecked mines and destroyed valuable machinery and ore bodies. Whatever their motive may have been, their actions were inexcusable.

Fortunately for me, the Gold Trust had far less than its share of such people, and I ran up against them mostly during the years I was working in other metal industries. Our Trust had the advantage of enlightened direction from the moment Serebrovsky started to build it up in 1928. He brought many good managers and engineers with him from the oil industry which he had directed before, and he has been able to keep this staff together down to the present time. He lost very few of his principal engineers, either by defection to other trusts or by the successive purges which have disrupted the managing staffs of some Soviet industries time and again. The Gold Trust did not even lose many of its political agents, who were the chief sufferers in the nation-wide purge which started in the summer of 1936 and continued into 1938.

The fact is that Soviet trusts thus far have been strongly personalized organizations. The man at the top has had tremendous powers, and he has filled up the organization

with his own men. This was just as true of the Gold Trust as of others. In our case the man at the top happened to be the right sort, and he surrounded himself with men like himself. In some of the other industries, such as the copper mines in which I also worked, the men at the top were the wrong sort, and they filled up their organizations with fools and criminals, so that the removal of the man at the top often had to be followed by the removal of large sections of the managing staffs.

Let me give a brief description of the organizational set-up of the Gold Trust, which is generally similar to all other Soviet trusts. This is the picture not only for the trust as a whole, with its main offices in Moscow, but also for every branch of the trust and for every individual mine or group of mines.

The Trust is headed by a general manager, who has directly beneath him a chief engineer and deputy manager. The manager is almost always a Communist politician who may or may not also be a first-class industrial executive. The chief engineer and deputy manager is a technician, and often actually runs the enterprise if the general manager is too ignorant or too busy with political work. But the Communist manager always has the last word.

The Gold Trust is theoretically a branch of the Commissariat of Heavy Industry, but because of Serebrovsky's enmity with Piatakoff and the personal interest of Stalin in this trust, it actually exercised a considerable degree of independence.

The Central Gold Trust has organized between fifteen and twenty branch trusts, divided geographically, with exactly the same set-up as the main trust. In addition, about ten of the larger groups of mines have been made

independent of any branch trust and report directly to Moscow. The branch trusts look after all mines in their territory with the exception of the independent mines I have mentioned, and individual mines are organized in precisely the same fashion, divided into the same departments as the central and branch trusts.

This system avoids excessive interference or overlapping between departments, and enables the central organization to keep in close touch with the smallest and most remote of its numerous mines and enterprises. Let us suppose, as an illustration, that the food supply department of the central trust in Moscow issues a general order applicable in all mines and enterprises. This order is sent in writing to managers of all branch trusts and independent mines and simultaneously to the heads of all branch food supply departments. From the branch trusts it is immediately circulated simultaneously to managers and food supply departments in individual mines or enterprises under the branch trusts.

In order to permit rapid communication, the Gold Trust owns and operates its own broadcasting system, entirely independent of the Government Commissariat of Communications, and in addition most of the larger mines are connected by telegraph. Whenever a general order is issued in Moscow, it thus works down through the organization in the manner I have described, and is almost instantly diffused all over Russia, wherever gold mining operations occur.

The Gold Trust, like many other Soviet organizations, has had to develop a more or less independent industrial empire, partly because it is never safe to depend on other Soviet organizations for necessary goods or services. The

radio system is a case in point; communications have been very badly organized under the regular Government commissariat. In the same way, the Gold Trust has had to develop its own transport system, partly because it works in uncolonized regions and partly because the regular transportation systems have been notoriously over-loaded and inefficient.

The Gold Trust built up, during my ten-year period of work in Russia, its own fleets of combined passenger boats, barges, and tugs, and its own large fleets of motor trucks supplying almost every mine in Russia. Sometimes it even constructed its own interior light-gauge railways, such as the fifty-mile railway which connects a group of mines along the Lena River. It has had to build its own highways, thus opening up territory which was almost inaccessible. Some of the individual mines or groups of mines have also acquired airplanes, reindeer, camels, horses, and oxen as means of transportation. In Russia's out-of-the-way regions no one pays attention any longer to the curious juxtaposition of airplanes and teams of oxen under the same management in a mining transport department. And the same man who drives a team of oxen or camels may think nothing of hopping into a plane for a trip, if the occasion arises. In Kazakhstan and adjoining parts of Russia, camels are driven in teams, two abreast, like horses, hitched to wagons. I was startled the first time I saw a team of camels ambling along with a hay-rack trailing after them. They are funny-looking animals, but they seem to make better speed than horses.

Transport is operated, like everything else, from the central office in Moscow. The central department settles all deals for transport with the Government Railway Com-

missariat, and controls distribution and operation of all motor-truck and barge lines. This department organizes some horse, camel, and reindeer transport systems, and buys and distributes animals to various mines.

All departments operate in the same fashion. Each department in the main office issues general orders, and carries out general deals. These orders are passed on to all branches directly under the main office, both to the branch manager and to the department directly concerned. They are distributed again, in turn, by the branches to their own various units. When the orders start from the main office, they are usually general enough to apply everywhere; they become more specific as they go along, but branch managers and heads of departments are supposedly given enough leeway to adapt their orders to local conditions.

I suppose that the nearest thing to the great Soviet state trusts are our American corporations, and most Americans are familiar with the tendency of their corporations to acquire new and unexpected enterprises which seem to have nothing to do with their original purposes. The heads of the Gold Trust had no idea when they started, I am sure, that they would develop one of the largest and most unusual merchandising organizations in Russia. The "gold stores," which I have already mentioned in a previous chapter, have the reputation in Russia of being one of the most efficient chains of stores in the country. Yet they were started in a casual fashion as a kind of premium to encourage prospectors and lessees, and are still merely one branch of the Food Supply Department of the Central Gold Trust.

This department was organized in the first place to supply food to outlying mines and enterprises. It devel-

oped its branches, like all other departments, in every branch trust and individual mine or group of mines. Because mines and prospectors are so scattered, it was hardly feasible for ordinary Soviet retail food trusts to extend their stores to outlying gold-bearing regions, so the Gold Trust had to undertake this work. We have seen how, in 1933, when prospectors and lessees were legalized again, the Gold Trust decided to establish a chain of gold stores which would sell goods only in exchange for gold, and would provide a better supply than the paper currency stores in the same regions. This task was entrusted to the Food Supply Department.

This chain of gold stores grew very rapidly. Its managers were permitted to buy some imported products during the years when Soviet factories were providing only a small fraction of the demand and most Soviet citizens were not enabled to buy much in the way of food, clothing, or knickknacks. The privilege of buying in these stores was such a valuable concession that thousands became prospectors for no other reason.

The organizers of these stores proved to be far more efficient than most Soviet store managers. It is something of a shock to come across one of the big gold stores in some remote part of Siberia or the Far East where everything else is primitive, and discover a store almost as good as a general store in the United States, and much better than all except the very best stores in the largest cities of European Russia. Such is the power of gold, even under the Soviet system.

At times of general shortage, when there has been actual lack of food in some parts of Russia, the gold stores have carried full stocks of canned goods, confectionery, liquors,

tobacco, dried fruits, cheeses and sausages, dried and salt fish, clothing of all kinds, boots and shoes, bicycles, phonographs, radios, ice-skates and sporting goods, toys, mining tools, and quicksilver for miners. The privilege of buying in these stores is still considered so great that those who cannot get gold will pay large premiums in paper rubles for the scrip which is given to prospectors and lessees in return for their gold, and is the only medium of exchange accepted in the gold stores. This system may seem a little hard on ordinary Soviet citizens, but it serves the purpose of bringing out all gold, so that very little is hoarded, and there is no incentive for smuggling gold into China or Manchuria.

These gold stores also are much more obliging and efficient in serving customers than the ordinary Soviet store. If prospectors or concessionaires, for instance, want to buy automobiles or special equipment, they can get delivery through the gold stores in a comparatively short time, which is very unusual in Russia because of the shortage of almost all kinds of goods which still persists. The gold stores can get rapid delivery because they have been put at the top of the list, and have first call on available goods, just as the similar "Torgsin" stores had before they were abolished in 1935. The Torgsin stores also sold goods only for gold or foreign currency, and were intended to attract all hoards which were in hiding. As soon as the authorities believed the hoards were practically exhausted, the Torgsin stores were abolished.

As an employee of the Gold Trust, I was always proud to see how efficient our various enterprises were in comparison with most others in Russia. This same Food Supply Department established and operates a chain of road-

side inns and restaurants in several districts where large numbers of employees of the trust are active. Some of these are quite large and lively, with jazz bands and other similar evidences of "civilization." The food and service in these places have always been decidedly better than in eating-houses run by other Soviet organizations in the same districts. Unlike the gold stores, they are open to any who care to patronize them.

XV. WHERE TRAVEL ISN'T ROMANCE

THREE or four years ago, when I was coming from Moscow to Europe on a Russian express train, traveling in one of the luxurious international sleeping cars built for the Tsarist railways before the Revolution, I happened to overhear a couple of plump, well-dressed American women tourists talking to each other. One of them, who might have been president of the leading women's club in her home town, said to the other: "You simply cannot trust anything you read nowadays. I have read more than once that travel is difficult in Russia, but when we come over to see things for ourselves, we realize that we have been deceived, and that Russian trains are as comfortable as our own in America."

I have never butted into a conversation which didn't concern me, but I was strongly tempted on this occasion. If I had started to talk to those two smug ladies on the subject of travel in Russia, I probably would not have stopped until we reached the border station, because travel in Russia is one subject which arouses my deepest feelings. It has caused me more heartburning than all of my other experiences in Russia combined.

During my last five years in Russia, I covered more than 200,000 miles in the gold-bearing regions where conditions are still primitive. My work after 1932 made it necessary for me to keep on the move most of the time, and in districts where no such trains ran as the one patron-

ized by these women tourists. I have traveled with the aid of railways, boats, motor cars and trucks, barges, river steamers, reindeer, oxen, horses, donkeys, camels, sleighs, and airplanes of almost every conceivable model and size. I have changed over from a fine sleeping car on the trans-continental express to a freight car used for human freight, or to a motor-truck packed so full of men and women that they barely had room to stand.

I haven't minded the primitive conditions, which one expects in a country which is just being opened up. But I have minded the lack of organization, which is chiefly responsible for making travel just about as unpleasant as possible, when one gets off the tourist lanes. From the day I arrived in Moscow in 1928 and couldn't find a taxicab until the day I left Russia in the summer of 1937, I had one continuous struggle to wheedle transportation out of the Russians, who have done very little to make travel convenient or comfortable for their biggest, no less than their least important, citizens. I was never able to understand the sense of bringing a foreign engineer to Russia, paying him a large salary in foreign currency, and then having him waste days and weeks on end because he couldn't get hold of railway tickets.

My wife and I have had some almost incredible experiences. On one occasion, we waited for five days in the city of Sverdlovsk trying to get a railway ticket to Moscow. On each of the five nights, we had to go to the railway station about four o'clock in the morning, shortly before the express was due, piling all our baggage into a Russian one-horse carriage and plodding through the snow about four miles to the station. The railway officials positively refused to tell us or anyone else whether tickets

were available until ten minutes before the train arrived; they also had no information about whether or not the train was late until it reached the next division point. These trains were almost invariably late, so that it was no uncommon thing to wait for as long as ten hours in the station before one could even learn whether or not it would be possible to get tickets.

On this occasion, we were refused tickets on four nights running, after waiting in the station for hours each night. Then we piled our baggage into a carriage and went back to the hotel, which was overcrowded as usual, and could not give us a room, to face the prospect of waiting another twenty-four hours and make what might be another fruitless visit to the station. During these five days we never got a room at all; we slept sitting up in straight chairs in the lobby.

On another occasion, my wife and I arrived at a very small railway station in the Far East, in bitter cold weather, knowing that the place possessed no hotels or accommodations of any kind for the night. The station agent told us with the utmost positiveness that there were absolutely no tickets for that day's train. The train finally pulled in, and I went aboard and discovered from the conductors that there was plenty of empty space; but the conductors told me I would have to go back to the ticket office and get my tickets before I would be allowed aboard.

I hurried back to the ticket office, and argued with the agent for some time before I could induce him to sell me tickets. When I got back to the platform, I discovered to my chagrin that the train had meanwhile pulled out, leaving me and my wife to spend thirty hours in that little station, sleeping any way we could on the floor.

These journeys of ours, now that we can look back on them dispassionately, take on a quality of epic horror. I believe that we must award the palm to a trip we took together in 1935. My wife had accompanied me on a tour of inspection of gold mines in western Siberia, and we traveled about a hundred miles from the mines in an open automobile truck over rough roads through sleet and rain, and arrived in the evening at a little way-station, wet to the skin. We had to sit up all night in the hallway of the police office, with no opportunity to change our wet clothes. The next morning, when the train came through, it was again a case of absolutely no tickets, but we finally wheedled our way into a Maxim Gorky car, a freight car hooked on to a combined passenger and freight train and used for human freight. We traveled in this car, with its congested humanity, and still in our wet clothes, from eight o'clock in the morning until ten o'clock at night.

We then reached the junction with the main trans-Siberian railway, and were told that we would have to wait until ten o'clock the following morning for a train to Novo-Sibirsk. The only accommodation we could get for the night was a bench on the platform of the railway station, exposed to the weather and still in our wet clothes. To add to our discomfort, it turned bitter cold during the night.

The platform was crowded with men, women and children, including a number of exiled kulaks who were being moved from one place to another, and were very ragged specimens. Suddenly there was a great commotion; we roused ourselves and saw that the police were busily engaged in clearing the platform, shooing all the people out of sight of the tracks into an open space back of the

station. The east-bound express with tourists on board was due, and it was considered advisable to get these people out of sight. My wife and I by this time were so traveled-out and rough-looking that the police tried to make us go along, not suspecting that we were foreigners. But I flared up and they saw at once that we were not Russians, and let us stay on our bench.

With the help of the police we got a place on the train to Novo-Sibirsk, arriving there at ten o'clock at night. We got hold of a carriage to take us and our baggage to the town's main hotel, which we reached in a pretty fatigued state, as can be imagined. The clerk received us coldly, and told us we could not get a room until we had visited the public bath house and obtained a certificate, since that was the regulation now, as typhus was raging in the district. We asked where the bath house was located, and were told that it did not open until eight o'clock the next morning. I began to get mad.

"If we can't get into the bath house tonight, and you won't give us a room until we get into the bath house, what do you think we can do in the meantime?" I asked the clerk. He shrugged his shoulders. "It's the regulations, citizen," he replied. I left my exhausted wife sitting in the hotel lobby and went out in search of the police station. I explained to the police who I was and asked their help. They called up the hotel, and assured me I would be given a room at once.

I went back considerably cheered up, and registered myself, adding that my wife would come along soon to register. The clerk protested: "But your wife can't have a room; we have a place only for you. There is no special room for women here." I was too tired and disgusted to

go back to the friendly police officers for further help, and we finally got permission to sit up in the lobby in our wet clothes for the third consecutive night.

At eight o'clock the next morning, having had some sleep in spite of discomforts, we checked our baggage and went over to the bath house to conform with regulations. We were agreeably surprised; the bath house was clean and orderly, and we took good baths and had our clothing disinfected in the steam room. Then we went back to the hotel, triumphantly presented our certificates, and registered. The clerk selected a key and showed us a room. When we unlocked the door and stepped in, we drew back into the hallway by a common impulse. It was the filthiest room I saw during all my ten years in Russia. Here we were, clean and disinfected after sitting up three nights straight, and no one had bothered to clean and disinfect the hotel room for which the prospective guests must present certificates of cleanliness.

Since 1935, the Russian railways have obtained considerable favorable publicity abroad on account of improvements made by Lev Kaganovich, who was Commissar of Railways for two years. There have been improvements so far as freight is concerned; carloadings have gone up. And express trains on the main railroad lines seem to run a little closer to schedule.

But I am sorry to report that I couldn't see much improvement in the regions where I did most of my traveling. The railways, and steamship lines as well, have not organized traffic with any regard for the convenience of travelers. It must be borne in mind that I, as a foreigner, would be more likely to get help from the police and railway officials than a Russian in the same position. And I

was always traveling on business for the Government which was considered important. If I had such difficulties as I have reported, it can be imagined what the ordinary Russian traveler puts up with. I have known of several cases in which fairly important people have had to wait as long as twenty-one days in some railway station in order to get tickets for a necessary journey. It is obvious what effect such conditions must have on the state's business (which is the only business there is in Soviet Russia).

I looked hopefully for improvements when I made some long trips during 1937, but I didn't find many. Tickets always were sold out, as they had been before, and it was still impossible to get advance information about whether tickets would be available; so that busy men sometimes had to wait all day in a railroad station before they could even learn whether it would be possible for them to make an urgent trip.

The same is true of traffic on such rivers as the Irtysh and Yenisei, where large and fairly comfortable fleets of steamers are maintained. Here, too, the officials never know in advance whether a steamer has accommodations or whether the steamer is arriving on time or not. It is necessary to wait around all day on some occasions to find out whether or not a place is available. I never could see any excuse for this; conditions are no different in Russia in this respect than they are anywhere else. It seems to be due to nothing except bad organization and indifference to the traveling public.

There is too much of this "Public be damned!" attitude among Soviet officials, not only in the transportation system but in retail stores and Government offices. The Government has a monopoly of all essential services, and its

officials are not easily induced to put themselves out in any way to facilitate matters for the general public.

The Soviet authorities are always denouncing bureaucracy but they haven't yet managed to arouse much sense of consideration for the public in the hordes of officials who operate their system of state ownership of everything. My wife and I witnessed a good example of the bureaucratic mind at work when we took a flying inspection trip through the gold fields of Yakutia, that great Arctic empire in the Soviet northeast, in 1936. We were pressed for time, and were traveling practically without rest in an automobile. The Gold Trust has opened up this country, which was one of the principal gold-bearing regions even before the Revolution and has now been much more widely developed. The Gold Trust has laid out quite an elaborate network of conveniences in Yakutia, comparable to those once operated by the Hudson's Bay Company in Canada.

We came to one of the Trust's restaurants which are supposed to operate for twenty-four hours a day, late at night, and I ordered some tea and light food for my wife and myself, asking the waitress to hurry because we had to push ahead without delay. She shook her head. "You can't have any food, or even a glass of tea, for at least two hours," she told us. "Our regulations allow a two-hour period for washing floors, and the time fixed for washing has just arrived."

I have learned by experience that it is no use arguing with people in minor positions in Russia, especially if they are women, so I hunted out the manager, and explained that I must have something to eat immediately, since I

couldn't wait for two hours or anything like it. He refused, declaring that regulations must be observed.

I pulled out my documents, which showed that I was the Deputy Chief Engineer in Charge of Production for the same Gold Trust which employed him and owned this restaurant and almost everything else in this part of Yakutia. But he didn't care what my position was and pointed out that regulations are regulations.

Then I finally blew up and told him that he and his kind were the curse of Russia, and my anger made an impression where common sense had had no effect. He interrupted my eloquent flow of language with an offer to give us whatever we wanted. But by that time I was too angry to eat, and we pushed on hungry into the night.

The overcrowded and badly managed railways are one of the few places in Russia, in my experience, where petty graft is still common. It is usually possible, by paying a good, big bribe, to get some sort of place on express trains; I don't know how the porters and conductors manage to hold out tickets when there is so much demand for them and so many different kinds of inspectors, but I can testify that they do.

In 1936 a few enterprising station masters decided to help out busy travelers by authorizing porters to buy tickets for a fixed fee. Before that, the regulations had forbidden tickets to be sold to any other persons than those intending to use them, with a few privileged exceptions. It was now agreed that certain porters could take orders for tickets, at an advance of five per cent above the regular price.

The innovation promised to be helpful, but human nature is the same in Russia as anywhere else, and sometimes

a little more so. In this instance, the porters soon discovered that they could get more than their fixed fees from travelers who urgently required tickets, and it got to the point where they were practically putting the available tickets up at auction. And travelers who could not afford to pay commissions discovered that it was impossible to get tickets otherwise, since the porters and ticket sellers split the fees, and no tickets whatever went on sale in the ticket offices. There were so many complaints from those who could not afford to bribe porters that the practice was soon abandoned, and the mad free-for-all scramble for available tickets was resumed.

Travel is a special problem in Siberia and the Soviet Far East, as well as in such places as Yakutia, because of the extreme cold. The winters are long and hard, and the thermometer sometimes goes to 80° below zero over periods of weeks and even months. But industry cannot shut down for the winter, no matter how cold the weather may be, and engineers and managers have to travel from place to place the year round. Short winter journeys are not so difficult, because horses or camels or reindeer can pull sleighs over frozen roads in better time than they can drag carriages through thick mud in spring or summer. But the necessary long hops in winter would be a really serious problem if it were not for airplanes. In a country of such great distances as Russia, where railroads and motor highways have been so backward in development, the airplane can become more useful than in any other great industrial country.

The Russians have probably learned more during the past few years about flying airplanes in sub-zero weather than any other race. It is not only the hundreds of fliers

engaged in Arctic exploration and development who have received this training, but those other thousands who operate the regular civil air lines in Russia's pioneer eastern regions all through the long severe winters. They don't have such planes as ours, fitted up with every luxury for passengers, but their great new factories are turning out competent planes by the thousands. Russian aircraft factories were the first to introduce assembly lines for planes. This has not been done in such countries as the United States because models get out of date too soon, but the Russians don't feel any need to keep up to the minute on their civil air lines. They use planes which could never compete in American traffic, being too slow and too heavy. But they are better than camels or reindeer.

The Russians must have a natural aptitude for flying. Otherwise, one wouldn't find so many veterans still on the job after a dozen winters of regular flights in the Arctic or on the civil air lines of Siberia and the Far East. The hazards of keeping some of these air lines open during the coldest months are very considerable, although the Russians do not demand speed and regularity as we Americans do.

Of all the nerve-racking trips which I have taken in Russia in any sort of conveyance, I believe the worst was a brief hop in a rickety old open biplane which was being used to carry the mails in the Altai district. My presence was urgently required at an ailing mine, and the roads were blocked by blizzards. It was something like 50° below zero, and my only chance of getting through in the near future was in the mail plane.

I interviewed the pilot, and he said there was no chance. The front cockpit in the plane was just big enough for

him, and there was room only in the unprotected rear where he piled the mail bags. I asked: "Well, why can't I ride with the bags?" He shook his head, and answered: "You would freeze to death. There's very little protection from the cold." I asked him how long the flight would take, and he said about forty minutes. I said: "I can't freeze in forty minutes. I'll get behind the mail bags and they'll protect me."

The pilot continued to look doubtful, but I finally persuaded him to let me go along. I was used to cold; I have lived in severe climates in many parts of the world, and thought I knew what to expect. But when that plane got into the air, I realized that this kind of cold was something new in my experience, and that I was in for a rough time. I don't suppose I have ever been nearer death than I was on that short hop. The wind cut into me like the sharpest imaginable knife, and the pain it caused me became almost unbearable. I thought it would let up after a while, but it got worse instead of better. I finally decided that I simply couldn't bear it any longer, and tried to get the pilot's attention by shouting to him, and motioning him to land me somewhere, as it would have been easy to do in that country, which was practically one great landing field in wintertime.

But the pilot couldn't hear me with the wind roaring past. My suffering became more intense and it finally seemed to me that I would have to jump out of the plane to get some relief. That was the longest forty minutes I have ever spent. After that, I still did a lot of airplane travel, in winter as well as in summer, but I took good care not to go up in an open plane with the mercury way down below the zero mark.

XVI. MOTORING OVER CAMEL-TRAILS

IN the spring of 1934, the late Sergo Ordjonikidze, Commissar of Heavy Industry, decided to show his appreciation for my work in straightening out ailing mines by presenting me with a Soviet-made Ford automobile as a premium. This was a tremendous gift at that time in Russia; much more valuable than it would have been in any other country. For the Russians possessed only about two hundred thousand passenger automobiles in 1934; which meant one car for each eight hundred of the population. And almost all the cars in use were owned by state organizations and not by individuals. So this premium immediately put me among a very small favored class of individuals with cars of their own.

I acquired my automobile at a moment when I was laying out the schedule for a long tour of inspection to the outlying gold mines of the southern Urals, the steppes of Kazakhstan and the Altai Mountains in eastern Kazakhstan. Most of these mines are far from any railroad, and I had anticipated much waste of time and inconvenience in getting over this route. So now I said to myself: "Why not use the car for this trip?"

I suppose the idea would have seemed foolish to some people. I had been over some of this ground before, and knew that there were very few roads which could be called motor highways by any stretch of the imagination. I knew also that there were no service stations along most

of this route, and that I couldn't rely upon much help if the machine broke down at any point in this journey. And I wasn't at all sure that this Soviet-made automobile would stand up under such a severe test. It was modeled after the first Ford Model A open cars, and the plant had been installed at the Russian city of Nizhni-Novgorod (later named Gorky) with the permission and assistance of Ford. But the Russians themselves didn't have much confidence in their own products at that time, usually with good reason.

However, it is no pleasure to travel off the beaten track in Russia, even where there are railways, and I knew I would be better off on this trip if I used my automobile, so I decided to take a chance. The trip began to seem really risky, though, when I discovered that I could not get hold of any spare parts whatever with the exception of one extra front spring.

Russian chauffeurs were pessimistic when they learned that I proposed making this trip; they were always complaining about the quality of Soviet-made automobiles, and it is true that these cars broke down frequently. But I had an idea that the chauffeurs might be worse than the cars; they were notoriously reckless and seldom took time to break in a car properly. I was curious to see for myself how a Soviet-made automobile would stand up.

We undertook our preparations for this trip with considerable care. I made absolutely certain that the car was driven at low speeds for the first thousand miles, as would have been done in the United States, and that the oil was changed religiously. I intended to see that the car got a fair chance. Then, when the automobile was thoroughly broken in, I shipped it to the town of Miass, in the south-

ern Ural Mountains, and proceeded to Miass by rail to make final preparations.

My wife, who said she might as well take a chance on bad luck as be sure of it by staying behind, had decided to come along with me. In addition, I brought our Moscow chauffeur and a Russian technical assistant. So we had to take bedding and utensils for four people, together with enough personal baggage to last for several months and some food supplies, including such articles as spices, baking powder, coffee, and a few tinned goods which I knew were unobtainable anywhere in Kazakstan. We also had to carry enough gasoline and oil to last us for five hundred miles, as there were stretches where we couldn't hope to get a fresh supply of fuel for that distance.

I had baggage racks built on both front and rear bumpers and straps put on the running boards to hold five-gallon gasoline tins. Naturally, everything was made as secure as possible, since I knew what to expect. Not only were the roads nothing but old camel trails; but there were only two bridges along the entire route, near the larger Ural towns. I knew we would have to cross the larger streams, which were swollen at this time of year by melting snows, on ferries consisting of a pair of row-boats supporting a platform of planks and operated only by the current.

We negotiated the trip through the Urals without incident. The Ural mines were working fairly well, so that we were not delayed at any point. After we had gotten out of the Urals in the Kazak steppes, the country became flat as a floor, with scarcely any distinguishing landmarks. We pushed along day after day through some of the finest pasture land I have ever seen, all of it well-watered, with

rivers and lakes enough to support herds which probably could feed the whole of Europe.

But there were no herds here now; we saw only millions of wild geese and ducks, quail and grouse, upland birds and occasional gray wolves. We saw many wild steppe turkeys, too; birds weighing as much as forty pounds. Unlike American wild turkeys, they don't roost in trees, since there are no trees on the Kazak steppes.

I have mentioned how the nomads were taken off the steppes in 1929 and the years following, and how they destroyed a large part of their herds when the authorities threatened to combine them in collective farms. I had seen a great deal of this process, which was accompanied by force in case the nomads resisted, and later had done my share to train thousands of these ex-herders as miners. But I hadn't realized, until I took this long trip across the steppes, just how devastating the process which the Russians describe as "de-nomadization" had been.

The nomad tribes had been heavy sufferers in both the First and the Second Bolshevik Revolutions. In the Civil Wars following 1917, their horses and sheep had been confiscated by one armed force after another; and then in 1921, when the greatest of modern famines swept through Russia, the Kazak herds and flocks had been further reduced, so that in 1923 the number of domestic animals in Kazakhstan was only about 30 per cent of what it had been in 1916. Naturally, the nomads had suffered, as they depended almost entirely upon their animals for food, clothing and livelihood.

But in 1923 their herds began to increase again, and by 1928 they had come back to something like normal. This immense pastureland, not only in Kazakhstan but in the

surrounding portions of the southern Urals and Siberia, nurtured animals which might easily supply enough meat, dairy products, and wool for the whole of Russia. In Kazakstan about half the animals were sheep, the rest being horses and milk-mares, goats, and camels.

The nomads were in a fairly prosperous condition when I first arrived in Russia in 1928. Their herds were increasing every year and supplied meat and dairy products ample for themselves and for millions of city dwellers as well. The comparative prosperity of the nomads accounted to some extent for the cheapness and abundance of food during our first year in the southern Urals.

The nomads were once again among the principal sufferers when the Second Communist Revolution started in 1929. But the nomads were dirty and superstitious, and I could understand how the Communist reformers believed that they were doing them a favor by breaking up their old forms of life and persuading them, even by the use of force if necessary, to adopt a manner of life which was considered more civilized and sensible.

On this trip, however, as we pushed along day after day in our Ford car through these pastured plateaus, brilliant with green grass and sprinkled with multicolored wild flowers, my sympathies went out to those nomads who had forcibly resisted their conversion into "proletarians." I began to understand the spirit of the herders who had occupied these plateaus with their animals for centuries, living in their felt tents in summer and moving to adobe villages in winter. I could see how the life might appeal to them, even if it wasn't very progressive by modern standards. I even began to understand how they might be

willing to fight for this mode of existence if someone threatened to take them away from it.

It was a queer sensation to push through this beautiful, almost deserted country, following empty camel trails which had once been heavily traveled at this time of year. Once in a while we would come upon a small village of Russian settlers, whose ancestors had pushed into this uncultivated district after the Russian conquest in the nineteenth century. Occasionally we passed small groups of felt tents occupied by Kazaks who had been collectivized and induced to settle down in cattle-breeding farms, but who still preferred their tents to houses in warm weather.

We always stopped at villages, whether Russian or Kazak, to ask directions. In response to our questions we invariably got the same answer, "There is only one road, and that lies straight ahead." And without any exception, the results were the same. We drove for a mile or so beyond the village, and the road would suddenly spread out like a fan in a dozen different directions, where the peasants scattered to cultivate their various fields. So we would stop, and I would take an observation from the sun to make sure that we continued to head to the east.

We had a map of the mines I was supposed to visit, and managed to find most of them. Whenever we reached a mine, we were treated as honored guests, were given the best rooms available and replenished our supplies of food and fuel. In some of these mines, gasoline was carried in on camels to feed the machines which had often been brought in by the same medium.

Whenever we couldn't manage to connect with a mine at nightfall, we camped out on the open steppes. The weather was warm and the skies generally cloudless, and

the only drawback was the swarms of mosquitoes which gave us little peace. Wherever we made camp, my wife set up her one-burner kerosene stove and managed to turn out a five-course dinner for the four of us.

The chauffeur gave the car a careful once-over every evening, as it wouldn't do to get stranded in this untraveled country. I usually strolled off with my twenty-gauge shotgun, the only weapon possessed by any of our party, to add upland birds to the larder. The twenty-gauge wasn't quite heavy enough to bring down wild turkeys. After dinner we brought out the portable phonograph and had a little music before turning in.

Before the Revolution, we were told, these rich pastures would have been covered with herds and collections of yurts at this time of year. There was pasturage here for millions of milk-mares and camels and sheep, and it was now going to waste. The herds had disappeared, and the nomads with them. As we bumped along, we caught frequent glimpses of smoke rising lazily from the ruins of adobe villages once occupied in winter by herders. These villages had been set on fire during the struggle between the nomads and Communist reformers, and were still burning months later. This drifting smoke offered evidence both of the severity of the struggle, and of the eventual triumph over the old and unprogressive way of life.

Some of the gold mines we visited in northern Kazakhstan had been discovered and worked by the Mongols many centuries ago. We were told that a few gave evidence of being over a thousand years old. We were shown hollowed granite stones which had been used as mortars; copper picks, knives, and hammers which had been used as mining tools; and remnants of bone trays which ap-

peared to have been used as gold pans for washing ground ore. In one of the mines, they had found a dump of several thousand tons of old tailings, which were being hauled to one of the newer cyanide plants for a further recovery of ninety dollars to the ton.

In the summertime, these mines are amply provided with food and supplies of all kinds by caravans of motor trucks which follow the camel trails from the nearest railroad point, in some cases a matter of many hundreds of miles. But in the winter, they are shut off from the outside world for weeks at a time by the terrible blizzards which are one of the worst features of life in Kazakstan. The blizzards of our own prairie country in the Middle West seem like mere child's play by comparison.

The steppes in Kazakstan are flat as a board for hundreds of miles, with absolutely no windbreaks. The winds, when they come, accumulate such force that they roll up clouds of stinging sand and sand-like particles of snow. They often continue for days, and involve real dangers for any who venture out in them. Around the mines and smelters, which try to keep going in all sorts of weather, it is the custom to blow whistles every ten or fifteen minutes to prevent workmen from getting lost. In spite of such precautions, a number of workers get lost every winter. They lose their way in the short distances between their quarters and the mines or smelters, and are blown out into the steppes.

These gold mines in the steppe country of Kazakstan are the advance guard of the development and colonization of this vast republic, equal in size to Germany, France, Italy and Spain combined. Prospectors, lessees, and miners, as well as engineers and Communist managers not only are

developing the abundant gold resources of Kazakstan but also are responsible for extending the cultivation of adjoining farming land, the construction of towns, schools, clubs, movie houses, and the other appurtenances of modern civilization. Here, as elsewhere in Russia and in other countries, gold miners are the pioneers.

Modern equipment is being installed in these mines as rapidly as they are opened up, even though it has to be brought in by motor trucks and gets its fuel on camels. There is no doubt in my mind that northern Kazakstan is destined to become one of the great gold fields of the world, and that lode mining can be steadily expanded here as prospecting is extended and the geology is better understood.

We succeeded in reaching Ust-Kamenogorsk by the first of June, and carefully looked over our automobile and its load before pushing on through the Altai Mountains. The group of gold mines in this section was in bad shape, having suffered from the mismanagement of a manager who had gotten hold of some stories describing American cowboys, and had decided to imitate them. Not long before our arrival, he had taken on a heavy load of vodka and ridden on horseback into a clubhouse where some workmen were listening to a talk. Like a few other Soviet executives I have known, he ran these gold mines as if they were his own property, and apparently regarded the commissary department as chiefly useful to provide him and a few of his friends with banquets.

The resources here were very promising, but little had been done in the way of prospecting or equipping the mines. Thousands of people were idling about, and the principal mine of the district had accomplished only 4

per cent of its assigned plan. Reorganization had just begun, a new manager and chief engineer had been appointed for the district, and they asked me to help them work out plans for developing the twenty-odd small mines already opened, and for prospecting the area.

These twenty mines were scattered over an area about four hundred miles long by two hundred miles wide, stretching through the mountains lying along the borders between the Soviet Union and both Sinkiang and Outer Mongolia. We did not have time to visit all these properties, so we issued a call for all the local managers, chief engineers, and Communist officials to assemble for a conference at one of the largest mines.

When that crowd of men and women got together, they presented an unusual picture. More than half of the group were members of the Kazak and Kirghiz races, resembling Mongols in appearance. Most of them could not even understand Russian, so that my speech on the subject of mining and milling, which I gave in Russian, was immediately translated into the Kazak language for their benefit. Here was proof that the law was being observed which provided that at least half of the managing staff, as well as of the miners themselves, should be members of the native races. In the face of this handicap, it was hardly surprising that these mines hadn't done very well.

We spent about three months in the Altai Mountains, and then had to head back westward in order to cross the steppes before winter approached. Conditions were decidedly unpleasant at the time of our visit. A bad epidemic of typhus was raging in this section, and hundreds of people were suffering from malaria. The authorities had not provided quinine, either here or in other parts of

Russia at the time, and chronic malaria was setting in. Many of the Kazaks blamed the Russians for all their troubles, not distinguishing between Communist reformers and any other Russians, and there was bad feeling between the natives and the Russians, the latter composing about 20 per cent of the population of Kazakhstan.

The Russians who live among primitive tribesmen today have had to learn patience and forbearance to a marked degree. The Communists, possessing what someone has described as inverted snobbishness, have decided that since the Russians exploited the tribesmen in the past, therefore the Russians must now submit to any sort of indignity. The tribesmen, having the mentality of shrewd children, have quickly caught on to the idea that the Russians have no comeback for any trick played on them, and some of the tribesmen abuse the favored position given them by the Communists. The Russians simply have to grin and bear it, as they know from experience that any effort to retaliate against the tribesmen will be severely punished, and that Communist courts will always give the tribesmen the benefit of every doubt.

During this epidemic of typhus in the Altai Mountains, we ran into one mining village where the whole population was in danger of infection, and those who could still move around were lined up in front of the dispensary. The crowd was divided fairly equally between Russians and Kazaks. The Russians, being naturally cleaner and more careful, had taken considerable pains to keep themselves free of the lice which are a source of infection. But the Kazaks were wearing filthy clothing, and were covered with lice.

The crowd had formed in line as its members arrived,

and men and women stood there awaiting their turn to get into the dispensary. The Kazaks, knowing that the Russians were afraid of lice, were amusing themselves by picking lice off their clothing and flipping them onto the Russians. The expression of mixed anger, terror, and despair on the faces of those Russians was something to remember. But they could do nothing about it. The Kazaks wore sly and malicious grins, knowing that the Russians were powerless to object.

My wife and I sat up several successive nights in our automobile, in an effort to avoid any lice. Despite all our precautions, however, we were both bitten, and in precisely fourteen days, the period of incubation, my wife came down with a terrific headache and high fever, the symptoms of typhus. We naturally assumed that she had that disease, but there was nothing to do but nurse her through as best we could, and she finally recovered. Only a year later, when we were back in the United States on vacation, and when she came down with a recurrence of the same symptoms, did we learn that she had suffered from an attack of malaria, not typhus. But it wouldn't have done us much good if we had known, as there was no quinine available in Kazakhstan in 1934.

My wife's illness delayed us somewhat, and we encountered rather heavy falls of snow in the steppes. But we got back into the Ural Mountains about the first of November, feeling very much like modern nomads who had finished a long trek. We had gotten back where we started from by some minor modern miracle. We hadn't even used our extra front spring, the only spare part we had taken with us.

Our chugging Model A had carried us faithfully for

more than twelve thousand miles over the camel trails on the Kazak steppes and through the Altai Mountains which stretch along the Chinese border. It carried much more of a load than it was designed to carry, and it traversed territory which no car was designed to traverse. But it came through; which pleased me, as an engineer, very much indeed. I lost no opportunity to point out to the Russians that this car was treated right in the first place, and treated right afterward, too, and therefore responded to kind treatment.

We drove on over the Urals and as far as the Volga River before we finally took to the railway and shipped our automobile on to Moscow. Looking back on it now, that trip seems more risky than it appeared at the time. But one does such things in Russia, and comes through all right a surprising number of times, as we did.

XVII. POLICE RULE IN INDUSTRY

I HAD been looking forward to a good vacation after our five months of continuous travel and inspection in Kazakhstan. My wife was still weak after her illness, and the trip had taken most of my reserve of energy. But when I got back to Moscow in November, I learned that there was serious trouble in one of the largest mines in Kazakhstan, where a new cyanide plant had recently been installed. There was nothing for it but to retrace my course, and I didn't finish up that job until the end of January, 1935.

Down at this mine in Kazakhstan the news came to us that Sergei Kirov, second in command to Stalin himself on the Communist General Staff, had been assassinated. This event came as a tremendous shock to the Russian people, in a manner difficult for outsiders to understand. The Russians guessed, from previous experience, that this assassination would mean a revival of the nation-wide police hunts which had characterized the years between 1929 and 1933.

When this assassination occurred, in December, 1934, the country had just begun to settle down fairly comfortably after the painful years which followed the Second Communist Revolution. The authorities had won out in the knock-down and drag-out fight with the groups which they thought stood in the path of socialist development. All these groups had been liquidated, in one fashion or another, by the middle of 1933. Having proved that

they were masters in all parts of the country, the Communists had begun to compromise. They had almost starved a large share of the population in 1931 and 1932, trying to prove that their socialist principles would work, then had finally decided to modify them.

The legalizing of prospectors and lessees in the gold industry in the spring of 1933 was the first of a series of compromises. By the beginning of 1934, the small farmers who had thus far resisted attempts to drive them into collective farms were told that they could stay as they were. Those who had joined collective farms were given certain privileges which might have persuaded a lot of the others to join without the use of force if these privileges had been handed out a little sooner. Even the nomads were given the right to own herds again, although not quite so large as those they had previously held.

The country was getting calm again, and the people were losing much of their sense of bewilderment. The police were still busy arranging how to utilize the labor of hundreds of thousands of kulaks, ex-priests, and the like. But they had stopped rounding up others, and those who had escaped liquidation began to feel safe.

Then this assassination came along. Kirov, as the people knew, had been Stalin's right-hand man. The news of his assassination created consternation even in such remote mining settlements as that where I was staying in Kazakhstan. The people seemed to stop in their tracks and wait to see what Stalin and his associates would do.

They found out soon enough. The police began to round up all political suspects throughout the country. These people were on their lists, and it was a simple matter to hunt them down and put them in jail. Within a few

days more than a hundred of them were shot, without any open trial. In the summer of 1934, the Government had announced with a great air of kindness that the federal police powers were to be reduced, that they would no longer have the power to arrest people right and left and send them off into exile for five years without open trial. Now the Government announced the old powers were restored to the police, and the latter began to exercise them with the greatest vigor and enthusiasm. The number of arrests and exiles must have amounted to several hundred thousand in a few weeks.

I can testify that the Russians were terribly disturbed over this Kirov assassination. But I suspect their emotions were not due to sympathy for Kirov so much as concern for themselves. They had gone through two revolutions, and the second in many respects had been worse than the first. Now conditions had begun to get back to normal, and this assassination had to happen. I am sure most of the Russians didn't want any more trouble with the authorities at this time, and would have given a good deal to have avoided this murder and its inevitable consequences.

I have told in an earlier chapter how I had been warned before I came to Russia, while waiting in Berlin, about the active part played by police in the Soviet industrial system. I had learned soon enough that I must expect to find police officers and agents everywhere I went or worked, and should take anything they did for granted, without undue questioning. As time went by, I learned that the federal police have their agents, known or unknown or both, in every Soviet enterprise, whether it is a mine or a factory, a collective farm or a higher school, or an office of any kind.

By this time, in 1934, I knew in general how the police worked in industry. When I described the set-up of the Gold Trust, I omitted mention of one department which is present in every Soviet enterprise, but is not included in the diagrams describing industrial organizations. It is frankly called the "Secret Department," and operates entirely independently of the other chief executives of the enterprise. For example, I have myself acted for months at a time as the chief executive in several Soviet groups of mines or regional trusts, and even of the main Gold Trust itself. But I never had anything to do with this Secret Department and never was told exactly what its functions are.

It is known to everybody, however, that this department is the connecting link between the federal police and the enterprise. It was this department which checked up constantly on all our personnel in the Gold Trust, looked into "social origins" of our workers and officials, found out who had been priests, merchants, or kulaks, and arranged for a close watch to be kept on all those who might become "enemies of the people," to use the Soviet phrase for potential wreckers.

There was a great to-do in the United States when Senator Robert La Follette's investigating committee revealed that American industrial employers maintained paid spies, who posed as workers and mixed among the employees, noting their sentiments and making reports about their conduct and their opinions. The Communist newspaper in New York, which always praises everything that happens in the Soviet Union, played up this investigation to the limit, and made out that American employers were wicked beyond redemption. I certainly hold no brief for

American employers who hire labor spies, but I cannot understand how these Communist critics reconcile their disapproval of such tactics in America and their whole-hearted approval of everything that goes on in Russia.

I can testify that the only "employer" in Russia, the state, hires more labor spies than American industry could ever afford to do. It is always assumed, in every Soviet mine or factory or office, that a certain number of workers are police agents, and no one is ever quite sure which workers are agents and which are not. The police are known to have amateur agents almost everywhere, with instructions to report suspicious actions or conversation of any kind. There is so much vigilance of this kind in every Soviet enterprise that Soviet citizens seldom speak their real minds, even in a small group, for fear one of the group is a police agent. All reports of agents, whether professional or amateur, are apparently cleared through the Secret Department. It is known that these agents even report workers who grumble regularly.

Of course, there is plenty of need for close police supervision in Soviet industry. In the gold industry the police guard shipments of gold, which don't take up much space, and might easily be diverted. But they are kept even busier looking out for sabotage.

Sabotage was something strange to my experience before I went to Russia. In all my fourteen years' experience in Alaskan gold mines, I had never run across a case of sabotage. I knew there were people who sometimes tried to wreck plant or machinery in the United States, but I didn't know just how or why they operated. However, I hadn't worked many weeks in Russia before I encountered

unquestionable instances of deliberate and malicious wrecking.

One day in 1928, I went into a power station at the Kochkar gold mines. I just happened to drop my hand on one of the main bearings of a large Diesel engine as I walked by, and felt something gritty in the oil. I had the engine stopped immediately, and we removed from the oil reservoir about a quart of quartz sand, which could have been placed there only by design. On several other occasions, in the new milling plants at Kochkar, we found sand inside such equipment as speed reducers, which are entirely enclosed, and can be reached only by removing the hand-hold covers.

Such petty industrial sabotage was, and still is, so common in all branches of Soviet industry that Russian engineers can do little about it and were surprised at my own concern when I first encountered it. There was, and still is, so much of this sort of thing that the police have had to create a whole army of professional and amateur spies to cut the amount down. In fact, so many people in Soviet institutions are busy watching producers to see that they behave properly that I suspect there are more watchers than producers.

Why, I have been asked, is sabotage of this description so common in Soviet Russia, and so rare in most other countries? Do Russians have a peculiar bent for industrial wrecking?

People who ask such questions apparently haven't realized that the authorities in Russia have been, and still are, fighting a whole series of open or disguised civil wars. In the beginning, they fought and dispossessed the old aristocracy, the bankers and landowners and merchants of the

Tsarist régime. I have described how they later fought and dispossessed the little independent farmers and the little retail merchants and the nomad herders in Asia.

Of course, it's all for their own good, say the Communists. But many of these people can't see things that way, and remain bitter enemies of the Communists and their ideas, even after they have been put back to work in state industries. From these groups have come a considerable number of disgruntled workers who dislike Communists so much that they would gladly damage any of their enterprises if they could.

For this reason, the police have records of every industrial worker, and have traced back their careers to the time of the Revolution, so far as possible. Those who belonged to any group which has been dispossessed are given a black mark, and kept under constant watch. When anything serious happens, such as a fire or a cave-in in a mine, the police round up such people before they do anything else. And in the case of any big political crime, such as the Kirov assassination, the roundup becomes nationwide.

However, the police assigned to Soviet industrial enterprises do not confine themselves to watching potential wreckers. I know from my own observation that they also organize a network of labor spies. It is a fact that any trouble-maker among the workmen, who grumbles excessively or shows any tendency to criticize the Government, is likely to disappear quietly. The police handle such cases with great skill, and seldom raise a rumpus. I don't mean to suggest that such workers are treated violently; they are probably shipped off to out-of-the-way enterprises, perhaps to some of those operated by the police themselves.

It is difficult for Americans to comprehend the part played by the federal police under the Soviet system. In our country, the federal police are almost entirely concerned with tracing down criminals, and only criminals of the old-fashioned sort with which we are familiar. The authorities in Russia have created many new types of criminals, to include almost every man and woman who ventures to oppose any policy decided upon by the Government. The powers of the police have been immensely enlarged to deal with these numerous new varieties of criminals.

We have already mentioned a few of the new-style criminals in Russia, the kulaks, and others who resisted collectivization and were given several years of forced labor under police supervision. Another vast new class of criminals are those known as "speculators." A workman's wife, for example, stands in line at a state-owned drygoods store, and buys a dozen yards of cloth, which is all the store will sell at one time. She stands in line several times, waiting several hours each time, and finally gets together fifty or a hundred yards of cloth. If she sells this cloth, and takes any profit at all for her pains, she becomes a speculator. The Soviet newspapers often report prison sentences, sometimes even the maximum of ten years, for women who have bought articles in Government stores, and sold them for what we would consider a very modest profit, in view of the trouble they have taken.

The Soviet police also are busy tracing down different kinds of intellectual criminals, something like the heretics during the religious persecutions of the Middle Ages. If any Soviet citizen would dare to say, even to a small informal group of acquaintances, that he was against Com-

munism, he would of course be denounced to the police and arrested as an "enemy of the people." But it has now become more subtle than that; if any Communist expresses a view which the ruling group decides is unorthodox, he or she is turned over to the police for trial.

To trace down all the criminals, old and new types, is a big enough job, and requires a large police force. But the Soviet police also have many constructive tasks, as I have already suggested. Because they are in charge of all the men and women put at forced labor, and because tens of thousands of people have been sentenced to such labor, the police operate some of the greatest construction and industrial enterprises in Russia. They have built such great public works as the Baltic-White Sea canal and the Moscow-Volga canal; they have double-tracked the trans-Siberian railway for twenty-two hundred miles, using an army of at least one hundred thousand men and women prisoners for this purpose, who labored without any pause during three of the severe Siberian winters. The police also construct many of the main highways of Russia, especially the great new strategic motor roads. They are empowered to recruit peasant labor as well as prison labor for this purpose.

Uniformed federal police guard all the railways and all the borders of Russia. They guard all the principal Government officials and all the public buildings. If you want to get into any such building, you must get a permit from the police officer in charge of the building, and must have your permit countersigned by the person you see inside the building before the police guard will let you pass out. The police guard factories and mines in similar

fashion, whether the latter have any military significance or not.

The federal police were a great deal less in evidence when I arrived in Russia in 1928 than when I left that country in 1937. It seems to me that their functions have accumulated something like a snowball. So far as their number was concerned, it seemed to expand and contract in sympathy with the political atmosphere. After the enormous police activity at the time of the Kirov assassination, there was a period of comparative quiet through 1935 and the early part of 1936. Then, with the discovery of the "wrecking" conspiracy among higher Communists in 1936, and the removal of the police chief, Heinrich Yagoda, the activity of the federal police became more frenzied than at any other time in my experience, and was at its height when I left.

So far as industry is concerned, however, the federal police were active throughout my entire period in Russia. They are held partly responsible for whatever goes wrong in industry, and many things naturally go wrong in a country where large-scale modern industry is being introduced for the first time, with untrained peasant labor and inexperienced engineers and managers frequently in charge.

To me, as an American, it seems that the federal police have altogether too much of a hand in Soviet industry. The police mind is naturally over-suspicious, and sees deliberate crimes where none exists. Both Soviet workers and officials often are so green, industrially speaking, that it takes a very wise man indeed to determine between so-called wrecking and plain ignorance. There has been plenty of real wrecking in Soviet industry, as my experience has shown me. But I know that police agents, both professional

and amateur, are anxious to make a good showing. So they report every little blunder in every little industry as evidence of sabotage, and the executives and workers in all industries are kept in a turmoil by one police investigation after another, especially during periods of political tension.

The Soviet authorities, with their swollen federal police force, seem to me to represent a vicious circle. The more police agents they appoint in industry, the more reports they get of suspicious acts, and the more investigations the police make, the more setbacks occur in industry, because producers are too busy answering police questions to do their work. When these setbacks are reported, the authorities become more suspicious than ever, and appoint more police agents. The new agents want to show themselves more zealous than the old ones, and conduct investigations more furiously than ever. And so the circle goes.

When I was told in Berlin that I should expect much police activity in the Soviet gold mining industry, I did not feel right about it. And I had no reason to change that feeling after almost ten years of work in Soviet mines. I can understand why a certain amount of police supervision is necessary in Russian industry, whereas it would not be in Alaska, for example. There are still a lot of people in Russia who do not like the régime, and would be glad to damage it by sabotaging industry which it operates.

But I feel sure that the federal police have now gained much too strong a hold in Soviet industry, and a hold which it may be difficult to break. So long as they are as active as they have been recently, Soviet industry is bound

to suffer from too close attention from the naturally suspicious police mind.

It is not safe to permit any police force to become too independent, as we can observe in Russia. The federal police there have become so independent that they do not even entrust their correspondence to the Government postal or telegraph system. On more than one occasion, I have obtained a compartment on a crowded express train by courtesy of the federal police, who had reserved two compartments for their couriers, but could get along with one.

XVIII. THE SOVIET ENGINEER'S PLIGHT

I HAVE a powerful constitution, but it was put to a severe strain by the nature of my work in Russia, and my wife and I spent most of the first half of 1935 back in the United States being overhauled by doctors. Continuous travel under such conditions as I have described, eating any kind of food which came to hand, together with sixteen hours of exhausting work every day for long periods, will wear down the strongest constitution.

The Soviet system apparently assumes that its executives will wear down frequently, and allows periodic leaves of absence. The authorities have built in recent years a whole chain of rest homes and sanitariums reserved for higher executives, where they go for thorough overhauls two or three times a year. In these places the Russians often go to bed and rest most solidly for two weeks or a month, storing up enough energy so they can keep going for another six months with five or six hours of sleep a day.

It was always a shock, when our family came out of Russia for a vacation such as this one, to add up our expenditures when the fun was over. Unless anyone has actually gone through the experience, it is difficult to imagine the effect of coming out of Russia into any other country during this period and looking into the well-filled windows of one retail store after another. In Russia, there was always a shortage of every kind of consumer goods; outside, merchants were begging people to buy. Our Rus-

sian friends were happy as children when they got hold of a decent pair of shoes or a rayon dress or a plain watch or fountain pen, even if they had paid fantastic prices for them. The Soviet stores were always short of everything worth buying, and most of them never had any variety of food or clothes or household articles. The people at the top weren't much interested in making this kind of stuff, and wouldn't allow Soviet trusts to buy consumer goods abroad.

So when our family came out on a vacation, we began to spend money right and left, and it didn't take very long for the four of us to get through several thousand dollars of my hard-earned cash. A wife and two half-grown girls are hard to hold in after being prevented from shopping for considerable periods. In Russia, we had learned to grab as much of anything decent as the stores would sell us, and when we came out we had to restrain ourselves from buying out the first retail stores we struck in Europe or America.

Returning to Russia after my long vacation, I met with one of the most interesting incidents of my Soviet career. The authorities had decided to recognize my work in reorganizing gold mines by awarding me the Order of the Red Banner of Labor, a Soviet decoration which confers considerable prestige upon its holders. This award is made in the Kremlin by the President of the U.S.S.R., M. Kalinin.

For the remainder of my stay in Russia, my decoration was very useful to me. The Soviets have created several of these decorations, of varying importance and standing, which are given out to men and women who distinguish themselves in some line or other. Decorations are not only

a distinction, but have practical value as well. Order-bearers receive a small monthly stipend, rebate on taxes, free transportation, and are assured of better life pensions. Order-bearers are treated with respect everywhere, even by the federal police.

I settled down for several months of work in Moscow, and we were given one-half of a new duplex bungalow in an American type suburb which had been constructed by the Gold Trust for its executives. Our life in Moscow was a contrast to that we had been living in mining camps and provincial cities. We had more privileges than most of the Russians, but this life was in some ways more difficult than the more informal existence of the gold-bearing regions. Out there, we had to take life as it was, and accept it, but in Moscow we were always trying to live like Americans in our suburb, and that is impossible. Soviet stores offer no service, as we understand the term; they are always running short of everything, and it is never certain that you can buy the particular kind of meat or vegetables or fruit you have in mind. You have to take what is available, and consider yourself lucky to get anything. The Russians, who remember two famines, don't make many complaints. But Americans keep on trying to get what they want. The Soviet engineer not only has all the ordinary problems of his profession, but he also has a lot of special problems peculiar to the Soviet system. He stands midway between the top and bottom layers of industrial society, and has to endure a constant barrage of brutal criticism and officious interference from both directions. The Communists, the politicians, stand at the top and consider it their duty to keep the "specialists" on the mark. The ordinary workmen, at the bottom, have been

assured that they are the real rulers of the country, and in order to prove it to them, they are permitted to speak their minds freely to the engineers and executives who are theoretically their employees.

Quite often, some irresponsible sap, a casual workman or petty clerk or bookkeeper, will jump up in a meeting at a mine or factory and accuse anybody, from the director down, of wrecking, espionage, or anything else that comes into his head, and so far as I could observe, there was no way to punish or check such actions. On the other hand, if an executive made any such charges against the little fellows, he had to account to the full for everything he said.

Every Soviet industrial enterprise also has what they call a wall-newspaper, which is posted up in some prominent position. Any workman is supposed to have access to this poster for airing his grievances, and the device sometimes proves useful for correcting abuses of one kind or another. But it also is a convenient means of working off grudges against foremen or executives, and in my opinion does more harm than good, because it weakens industrial discipline and hence lowers production, without enough compensating advantages.

When I first went to Russia, the managing staff in industry were underpaid according to our standards, considering the heavy responsibilities they carried. This was especially true of those who were members of the Communist Party, who at that time agreed to accept maximum salaries considerably lower than the non-party staff, as evidence of their unselfishness and devotion to the cause of communism. Nearly all the chief managers of Soviet industry at this time received very small cash incomes. Even

then, however, the managing staff had perquisites which ordinary workers could not get. They had the use of automobiles, special restaurants, better "closed stores," and better houses.

After 1930, this system was gradually changed, and managers of all kinds, including Communists, were paid according to their position, with about the same relative differences as in this country. Some people in Russia today receive from ten to twenty times as much cash income as ordinary workers.

The increases in pay have been accompanied by a corresponding improvement in ability. I must say that many of the managers I encountered in Russian industries in 1928 and 1929 were not worth more than ordinary workers; in fact, it would have been worth while to pay some of them to stay at home and let the workers figure things out for themselves. Comparatively few of the chief executives of those days have managed to keep up with the procession. In competition with some of the more energetic young fellows since developed, they fell far behind, and have been shunted to unimportant posts. The average ability of managing staffs today is far superior to what it was in 1928.

For the past several years the Soviets have applied a system of one-man responsibility, which means the man at the top of any enterprise, big or little, is responsible for anything that happens. This system replaced the previous system of management by committees, which broke down completely. But the one-man system goes to the opposite extreme. The man at the top seldom dares to delegate authority of any kind, and the executives subordinate to him never dare to take responsibility for any decision. As

a result, nobody except one man will do anything unless it is written down in black and white in the regulations; and the head man is so crushed under a burden of routine that he has to struggle to find time for the important decisions which he alone can make.

One small and unimportant example will serve to show as well as anything else how the busiest and best-trained engineers are bogged down in routine and pestered by political control. I refer to the perpetual nuisance of so-called inventors, crack-brained persons who are convinced they have made some amazing mechanical discovery, a type that seems to be more numerous in Russia than elsewhere. These people demand and usually get access to the chief engineer of an enterprise or trust, because underlings are afraid to take the responsibility of rejecting their contrivances, however obvious their uselessness may be.

I worked as chief engineer not only in the main office but in some branch offices of the Gold Trust, and was bothered by a steady procession of these cranks. If they don't receive prompt and special attention, they rush around to some Communist politician and complain that the "bureaucrats" are neglecting them. The Communists, like all other politicians, always pose as the friend of the little people against the bureaucrats, and they can make an infernal amount of trouble for engineers or managers under a system where politicians control everything.

To prevent their whole time being taken up with "inventors," Soviet chief engineers have worked out a stock subterfuge. When any contrivance is submitted, the chief immediately appoints a commission to look it over, even though he can see at a glance that it is useless. I knew all about this trick, and when I was working in Moscow,

used it to get rid of a particularly persistent "inventor." By naming a commission, I protected myself against accusations from the politicians that I was ignoring prospective geniuses.

In the instance I am referring to, the members of the commission were no more anxious than I was to get into the black books of the politicians, so they turned in a report with many "ifs" and "buts" and a good sprinkling of "on the one hand and on the other." Since the "invention" was so obviously useless that any freshman student engineer could have told at a glance why it wouldn't work, I decided to have some fun with my commission. I sent them back a brief memo, saying that I gathered from their report that they recommended testing the device, which I figured would cost thirty thousand rubles. On the basis of their report, I said I would order the test to be made, with the understanding that if the contrivance proved to be useless, the cost of the test would come out of the salaries of the engineers who had recommended the test.

About fifteen minutes after I had dispatched this memo, one of the engineers on the commission asked to see me. I kept a solemn face when he came in. He hemmed and hawed a bit, and then said that he had consulted the other members of the commission after reading my memo, and they would like to take back their report for reconsideration. I gave it back to him, and before the day was over I was handed a fresh report denouncing the contrivance as useless, and recommending that it be refused. I added my own approval to this recommendation, and in this case there was no political kick-back.

I have never worked for government organizations in

other countries than Russia, so that I have no basis for comparing Soviet and other government enterprises. I have heard that the rigidity which is characteristic of all Soviet industry also is found in government enterprise in other countries. In Russia, of course, the whole of industry is a government enterprise, and the system certainly discourages initiative. It is safer to take no chances, but to go along as quietly as possible without attracting attention of any kind. This is especially true in Russia because engineers are so often accused of "wrecking," and may go to prison or even be shot if they are found guilty.

I know of one case in which a Russian who had been working as interpreter for a foreign engineer had to look for another job after the engineer left Russia. A friend of mine, who knew this Russian well, met him one day and asked him how he was getting along. He said he had taken a job as a petty clerk. My friend said: "But that job's too small for you. You certainly can get something better than that!"

"Yes," replied the Russian, "I was offered a very good job as head of a timber trust, at a salary three times what I am receiving now. But I didn't dare take it."

"Why not?" asked my friend.

"Because it carries too much responsibility," answered the Russian. "The timber industry has not been doing too well lately, and if anything went wrong in this trust, whether it was my fault or not, I would be held responsible. And I am in an especially bad position because I have worked with foreigners. Police investigators always look for the most obvious suspect, and who could be more obvious than a man who worked with foreigners?"

I know of a Russian engineer who worked in a munic-

ipal power station. For some years he worked in the office doing a routine job, and then, one day, he was offered the job of chief engineer in charge of the station. He not only refused to take the promotion, but resigned from his old job and found work in an entirely different line, for which he had no special training. Asked why he had done this, he replied: "If I had accepted the promotion, I would have been responsible for anything which went wrong in the power station, and risked being shot or going to prison for a long stretch. But if I refused to take the promotion, the police would have considered that suspicious, too, and so I left the station and the engineering profession entirely, in the hope of being left alone."

My experience has shown me that these examples are not uncommon. Only the boldest and most self-confident men are prepared to accept responsibility promptly and fully in Soviet industry. The authorities are caught on the horns of a dilemma. They have to be fierce with potential wreckers, to discourage them from sabotaging industry. On the other hand, they discourage honest executives by always threatening them.

When I went to Russia, in 1928, the country had just passed through one or another of its numerous purges, and engineers, especially, were the object of suspicion. Then, beginning in 1933, things became much better. It even got so I could give orders in a mine or smelter with confidence that they would be carried out. But when the great anti-Stalin conspiracy was discovered in 1936, a greater reign of terror started than any which had preceded it, and industry was particularly affected, because the conspirators confessed that they had concentrated on wrecking several industries.

With all the noise and excitement of the last purge, which was still at its height when I left Russia in August, 1937, conditions returned to about the position they were in ten years before, and the spirit of initiative which had begun to develop among industrial executives was stifled again. I will not venture to predict what may happen in future, but I am sure from my own experiences that recovery from this last wave of executions and arrests will require several years.

A Russian acquaintance, naïvely assuming that I was a Communist sympathizer because I was working in Russia, once asked me why I didn't become a Soviet citizen. I replied: "Don't you know that my American citizenship constitutes about 95 per cent of my value to Soviet industry? Because I am an American, I am not compelled or expected to do many of the things which Soviet engineers have to do, and which cut down their efficiency to a fraction of what it could be."

The Communist politicians who run Russia insist that engineers, like everybody else, must take an active part in the country's political life. My Russian associates had to spend hours every day on matters which had nothing to do with production. They often had to waste so much time at meetings and parades and talk-fests of various kinds that they couldn't possibly do their work well. Like all politicians, the Communists attach an inordinate value to speech-making. The engineers are blamed if they neglect this outside stuff, and yet are blamed if their work doesn't go well.

Soviet engineers are expected to work long hours at their regular jobs. They are expected to keep up with the latest technical improvements in their profession. They

are expected to attend endless political meetings and to make speeches to workers whenever the latter ask for them. They are also expected to study Communist theories carefully, especially if they belong to the Party, and it is no easy task to keep up with theories which may change greatly overnight. If they don't manage all this, they are likely to lose their jobs and possibly their freedom. I take off my hat to any man who can do a good job year after year under such conditions. And I am not surprised that such a large number of nervous breakdowns occur regularly among Soviet engineers and managers.

In addition to all this, Soviet engineers are subjected to several times more paper work than those in western industrial countries. Before I went to Russia, I worked for a time at the Alaska-Juneau mines, where the daily output of ore ranks among the largest in the world. The office force in these mines consisted of five people, of whom one was the manager. At my first mines in Russia, where the output was a fraction of that in the Alaska mines, the office force numbered a hundred and fifty men and women, and even that number was always behind in its paper work. At the Alaska mines, I could get any figures I needed in a minute, but in Russia it might take weeks or even months.

In the position I held during my last five years in Russia, I should have spent most of my working day in the mines or mills, as it was my business to analyze ailing mines or plants quickly and set them on the right track. But I often had to sit at my desk most of the day, wading through countless orders and instructions and regulations which, pouring out from headquarters and sub-headquarters, kept us all up to our necks in paper. It's not surprising that

there is always a paper shortage in Russia, or that there is alleged to be no unemployment. The surplus population can always find a job adding to the mountains of paper.

I was always trying to get away from this paper work, which slows up rather than helps production, and on one occasion I thought I had a chance. I was acting one morning as interpreter between Serebrovsky and an American engineer who could speak no Russian. The American wanted to go over some plans and written proposals he had worked out. Serebrovsky listened for a little while, and then broke in: "Tell this engineer I don't want paper from him. I can get enough of that from the Russian engineers. I want you fellows to give me metal, not paper."

After that, I figured I had a pretext for cutting down some of my own paper work. If there were objections, I could fall back on what Serebrovsky had said. But I soon discovered that there is no escaping the mass of paper which pours in on engineers and executives, and cannot be ignored.

On the several occasions when I returned from Russia for brief holidays in the States, I was struck anew by the comparative absence of red-tape in American industry. It was not only a question of red-tape. If the same kind of bookkeeping and cost-accounting which we have in this country were put into proper operation in Russia, it would become much easier for Moscow to control the "mistakes" and sabotage which have always caused so much trouble.

After my holidays, I always went back to Russia with fresh spirit, and on several occasions proposed to install, in one or two mines at least, a system which would permit engineers to obtain promptly accurate reports of operations and costs, which are essential, as any engineer knows,

to efficient control of the mines. They are just as essential under the Russian system as they are under any other.

Well, I tried to stress the importance of such work, but I never got very far. Usually it came to nothing more than writing a few letters back and forth, which, after all, is just a further waste of paper. The system in Russia seems to depend upon paper as its meat and drink. And I was never able to see any way out of it, under their system.

XIX. NEMESIS

THERE is one thing in Russia which hangs over the heads of engineers at all times, and sometimes gives each of them the unpleasant feeling that it will sooner or later get him into trouble. I am speaking about the Planned Economy which has taken such deep root in the Soviet economic system that there is no getting away from it, anywhere you go.

When I first went to Russia, Planned Economy was not so strongly developed as it has since become. There was a lot of talk about it, but it hadn't begun actually to interfere very much with the work of various industrial enterprises. We had to draw up estimates of production, necessary equipment, and so on, as we would do anywhere else, and these had to be approved by the Supreme Economic Council which was then the co-ordinating organization for all state industries.

But as the years passed, Planned Economy began to swell out and take a bigger share in every kind of enterprise. The "planning department" became an outstanding feature of every mine or factory or mill, and was operated, like all other departments, from the top down. The idea was carried so far that every gold prospector, starting off to look for pay dirt, was solemnly assigned a production plan for the ensuing year.

In the Gold Trust, the Planning Department in the main office at Moscow is connected with branch planning

departments in every sub-trust and the latter are connected in turn with planning departments in every separate mine or group of mines. All these planning departments in all the Soviet trusts and enterprises are headed by the State Planning Commission (Gosplan) in Moscow, which is connected directly with the Soviet cabinet (Council of People's Commissars).

The number of employees of these numerous planning departments increased by leaps and bounds, so that before long thousands of men and women were engaged throughout the year in the process of planning. They tried to keep busy, and spent a considerable part of their time thinking up questionnaires and forms of all kinds, which they sent out to engineers and managers to be filled out. The business of filling out forms of this sort has become one of the chief functions of every Soviet executive's offices.

This system, as it has finally worked out, makes it almost impossible for an engineer to avoid trouble sooner or later. At the end of each year, every engineer is expected to turn in a complete program of work for the ensuing year, and even for longer terms. This program includes output, financial needs, orders for all technical and food supplies. It naturally takes a very clever man to foresee the whole activity of a group of mines or a whole trust a year or more in advance.

This is especially true in Russia, where the shortage of almost everything makes it probable that some supplies will not be delivered as promised. When this occurs, the whole plan may be thrown out of balance, and someone has to be blamed for it because the Soviet system demands culprits for anything out of the way which takes place.

In mining, something may happen which the most intelligent and well-educated engineer could not foresee. This is especially true where production is forced to a maximum and there is insufficient developed ore to cover the year's production. For example, conditions of the ore body may change so that the plan proposed for a group of mines at the beginning of the year will become entirely unworkable a few weeks later. But meanwhile, through Planned Economy, the plan for this particular group of mines has been interlaced with other plans in a very complicated manner, and the failure of one part of the plan may mean the failure of the whole.

So our Soviet engineers have a rigid plan clamped down upon them, and if they fail to carry out the plan in practice, they are held responsible, and are told that since they proposed these plans themselves, there must be something suspicious if they don't fulfill them. And if the plan submitted by one engineer breaks down, even for some reason which was unavoidable, all the other engineers associated with the general plan attack him fiercely because their plans are tied up with his plan, and someone will be blamed for failure.

In some cases, engineers may discover after they have submitted their plans that larger output is possible. This is often the case in mines, where it is hardly possible to predict output a year in advance with accuracy. But the engineer has submitted his plan, has arranged for certain equipment, and has had the plan approved by the politicians above him. It is safer and easier to leave matters as they are.

He knows that the state needs as much output as possible, and that he can produce much more than he had

forecast in his annual plan. But if he announces now that he can produce twice as much as he had mentioned a few weeks before, some politician or some policeman will become suspicious, and he will at least have to endure the unpleasantness of an investigation, if nothing worse. So he lets matters rest, hoping that no one will find out that his mine could have produced much more ore.

The system also encourages lazy engineers or managers to submit a plan for output which they know is well below the capacity of their mines or mills. They are then absolutely sure they can fulfill their quota, if they can induce the planning authorities to accept their low estimate. And in recent years, since the Government has begun to offer substantial premiums and bonuses for over-fulfillment of plan, this tendency has become more pronounced. If engineers can get modest estimates accepted, they are sure of large material rewards for themselves and their assistants for over-fulfilling their plan.

In the Gold Trust, planning was carried on as efficiently as in other Soviet enterprises with which I was familiar. Our main office, for example, carefully checked over all plans which had been prepared and submitted by the individual mines or groups of mines or sub-trusts. If these plans were not in line with the amount of production our engineers in the central office considered possible, the plans were increased.

In a time of political crisis, such as Russia has gone through since the summer of 1936, Planned Economy becomes even more of a nightmare to engineers and managers. The police during such periods are closely watching every enterprise and practically every producer. They follow up immediately every report of suspicious actions,

and their investigations take up the time and thought of the most responsible workers in a mine or factory for weeks on end. In such circumstances, it becomes difficult either to make or to carry out a planned program of production.

Engineers become nervous, and are more likely than not to make slips. Every mistake is a cause for suspicion, and is usually followed by a police investigation. If any large enterprise or industry begins to fall behind its plan, the newspapers set up a howl, and the engineers and managers become more nervous than ever. It used to puzzle me how men and women manage to work as well as they do in such an atmosphere.

Certain industries, which lose many of their best executives, fall so far behind their plan that they cannot make promised deliveries to other industries, and the latter also begin to fall behind for lack of necessary materials. Modern industry is closely co-ordinated, and Planned Economy calls for the most delicate kind of adjustments if it is to work at all. But with police grabbing engineers and managers in wholesale lots, and with the rest shivering for fear they will be the next to fall under suspicion, the whole system naturally breaks down for the time being, and it is no easy task to get it started again.

It is no mere coincidence, in my opinion, that Soviet enterprises which are operated directly by the federal police fulfill their plans more consistently than any other. Planned Economy, as it has worked out in Russia, requires the kind of control exercised by the police over all the managers, engineers, and workers involved. When the Soviet police undertake to construct a dam or railway, they can make their plans years in advance and carry them

out consistently. They have their laborers under complete control, because they are prisoners and cannot leave the job simply because they are dissatisfied, as they can do in other industries. The police have enough influence to get the necessary raw materials promptly, so they don't face the danger of delayed deliveries, as some other industries do. The Soviet newspapers often praise the police for their efficient operation of construction works, and I agree that these police enterprises are the place to study Planned Economy at its best. If Planned Economy is to be introduced completely in Soviet industry, and is to operate properly and regularly, I suspect that some such control as the police exercise in their own enterprises will be necessary. Without some such control, I doubt if it will ever work, in Russia or anywhere else.

XX. RUSSIAN AMAZONS

A FRENCH miner visited Russia in 1937 for four or five weeks and wrote a series of articles for French and other European newspapers. He said that before he went to Russia and visited the mines there he had been an active socialist and "friend of the Soviet Union," but after he saw conditions in Soviet mines, he was cured of his socialism. And one of the sights which horrified him most was that of Soviet women working as miners.

Well, I am certainly no socialist, and if I had been one it is quite possible that what I saw in Russia would have cured me. But I must admit that the employment of women in Soviet mines and smelters was not so shocking to me as it was to this French miner, and I saw a great deal more of it than he did. For I had close dealings with women workers over a period of years.

When I first went to Russia, no women were actually working in the mines. A few girls and young women had started their training as engineers and geologists, and were scandalizing oldtime miners by puttering around in drifts and tunnels and mills. But some two years after I arrived in Russia, late in 1929, when the first Five Year Plan got under way, women began to take over some of the light jobs, such as running compressors and hoists, distributing drill steel around the mines, assisting surveyors, and sometimes acting as trammers, pushing ore cars.

When the first women appeared in the mines, there was

considerable opposition from male miners, who clung for some time to the old superstition that accidents invariably occur when women visit mines. Inasmuch as accidents had occurred just as often in Soviet mines before there were any women to be blamed for them, this superstition didn't get much consideration. It wasn't long before the presence of women was taken for granted, although some of the older mines never did entirely get over their resentment, and sometimes still show it.

Women took jobs in mills and smelters in much larger numbers than in the mines. They labored alongside men as operators, doing work which is dirty but not particularly heavy. From the beginning, they were shown no favors. They were expected to do an equivalent amount of work for a day's pay, under the same working conditions, with the same responsibilities.

From the engineer's point of view, the question of woman's labor is whether or not she can pull her weight. Judging from my experience in Soviet mines and mills, I should say that women average better than men in production. As a general rule, women proved to be more conscientious in their work and better disposed to maintain discipline. These qualities compensated for their physical inferiority except on such jobs as require an exceptionally strong physique.

Even on such jobs, women sometimes found places. I came across a big husky Russian peasant woman working as a drill-runner in a mine in the Urals. Her job consisted in taking a rock-drill weighing about fifty pounds, and drilling holes with this bulky machine in the solid rock. The hammer of a rock-drill strikes about eighteen hundred blows a minute, and it takes a hefty man to handle the

machine for long. After watching this woman operate her drill for a while, I suggested that the job was hardly suited to a woman. She thought I was joking, and I never was able to convince her that I was serious. She was intensely proud of the fact that she was the only woman drill-runner in that group of mines.

This woman was an exception. Most women workers in Soviet industry do not undertake such heavy work; they are usually confined to mechanized shops or mills or mines, where manual skill is more important than brawn. But Soviet women do tackle all sorts of jobs which the girls and women of western industrial countries are never expected to do. They clean streets and sewers, they help to build subways and railroads and canals, they work in steel mills throwing around heavy bars of red hot metal. They do a large share of the manual work of the country. In 1936, according to official figures, 28 per cent of the workers in the Soviet mining industry were women.

In considering differences between the kinds of work done by Soviet and other women, I think it is necessary to bear in mind that women of most of the races in Russia have been accustomed to physical labor for generations. About 85 per cent of the adults were engaged in agriculture in Russia as late as 1928. Russian farm women worked out in the fields with their men. They still do today.

When the Moscow authorities began to apply their ambitious industrializing program, beginning in 1929, they were smart enough to realize that they could not accomplish what they wanted unless they could attract husky peasant girls into the new factories, mills, and mines. These farm girls were more adaptable than farm men, and found it easier to pick up the knack of operating machinery.

Without their help, it might have proved impossible to keep Russia's new industries going during the critical years following 1929.

Anyone who knows Russian women will appreciate that the authorities couldn't hope to accomplish much without their good will. Working alongside their men-folk on Russia's millions of small farms, they developed decided qualities of endurance and initiative.

These qualities are especially useful in a pinch. A friend of mine who lived in Shanghai at the time of the Russian Revolution was greatly impressed by the conduct of Russian women refugees who overflowed into that city where human labor of all kinds is so cheap that few white people can hope to compete with the Chinese. Russian refugees reached Shanghai by the thousands, most of them penniless and untrained for any profitable occupations. They had been cast adrift from all their old associations, many of them spoke only the Russian language, and their outlook was black.

The men, according to my friend, were so completely knocked out by the turn of events that they were useless for years. But the women took hold immediately, and it was the women who organized the self-respecting and self-supporting Russian community which grew up in Shanghai in subsequent years, and gradually established a "Little Russia" in China, holding on to the old traditions and passing on to their children the language and customs and literature of pre-Revolutionary Russia.

The women in Shanghai at first did anything which came to hand to support their families. They worked as servants for Chinese coolie wages, they worked in night-clubs as "taxi-dancers" and "hostesses"; they trained them-

selves as manicurists and stenographers. They lived cheerfully in poverty, saving enough from their meager earnings to educate their children or younger brothers and sisters, so that after a few years had passed, they had climbed out of the ruck of unskilled and untrained labor.

It was almost as difficult to make a new life inside Russia after the Revolution as in these émigré colonies in foreign countries. The Soviet peoples had to adapt themselves to new and rapidly changing conditions, and the women inside Russia, like those outside, proved able to fit themselves more readily into the new picture. The Communist authorities, calmly laying out their plans, figured out a double-barreled method of inducing women to get behind their industrialization program.

On the one hand, the elaborate propaganda machine was set to work inducing women to go into every kind of industrial occupation. The Communists had made a great point of the equality of women after 1917, and now they said in effect: "Women, here's your chance to show whether you take equality seriously. We've opened all our schools to you, we've opened all our jobs to you on a basis of equal pay for equal work in every line. Now we need your help in our new industries. We need your assistance in our mines and subways and steel mills as well as in our offices and on our farms. Will you help us build our industries, even if the work is dirty or unpleasant, or will you leave that to men?"

That was the general tone of the appeal made to Soviet women, and it proved effective. At a time when working conditions were bad, when housing and the supply of food was inadequate, when male workers were roaming around in droves looking for a "better 'ole," women stuck to their

jobs more faithfully than the men, and played a considerable part in putting across the industrial program.

But the authorities accompanied these emotional appeals to their women by another method of persuasion which was indirect and more or less hidden but probably even more effective. This was the solid method of economic necessity. Controlling the entire national economy, the authorities at Moscow could fix both wages and prices to an extent which would not be possible in most countries. During the years following 1929, they fixed wages and prices so as to make it extremely difficult for a working man to support his wife and family in the least degree of comfort. If the wife didn't work, the family was likely to find itself on short rations.

So that was the arrangement made for women. The propaganda machine made it fashionable for them to work in the roughest kind of conditions. The wage-price set-up made it almost necessary for them to take some kind of work in order to live. The authorities began to establish day nurseries for the children of working women, and the law giving them two months off with full pay for childbirth was very strictly observed. Millions of women took jobs in mines, factories, mills, forests, doing all except the heaviest kinds of manual labor, and this vast army of labor made it possible for Russian industry to advance as far as it has in a comparatively short time.

As for the effects of such work as mining on women, I am not competent to judge, being no doctor. I always looked at the matter from the other end, and was interested in whether women workers earned their pay. They did that.

But I believe that the wholesale use of women in such

work as mining, steel fabrication, and the like, is a temporary phase of Soviet development and is already passing. During my last two years in Russia, from 1935 to 1937, I noticed that there was less tendency for women to work, and less agitation to entice women into heavier industrial jobs. The word was beginning to get around that such work was better left to men.

Why was this? It was largely due to the increased wages earned by many skilled male workers through the wider application of the piece-work system. These workers, finding they could support a wife and family again, wanted their women back in the home, and the women were not averse to going back. The authorities also made no objection; in fact, they seemed to be encouraging the return to the home.

The economic motive was chiefly responsible for bringing so many Soviet women into heavy jobs in industry, and the same motive is now operating to send many of them back into the home. The wider application of piece-work in the last three or four years has made it possible for more skilled workers and managers to support their wives and families in comfort, and a large number of women are proving themselves quite willing to allow their husbands to support them.

This tendency is being officially encouraged. One of the biggest newspaper campaigns during my last year in Russia was made in support of a new association of the wives of engineers and managers in industry. These wives no longer work for a living, although many of them had previously done so. They are supported by their husbands, and devote most of their time to looking after their homes and families, a full-time job in Russia even more than in other

countries, because of the lack of service and difficulty in getting food and other supplies.

But the authorities wanted these wives to carry on social work in addition to their domestic work. Since the Government assumes the right to tell everybody in Russia what to do and how to do it, the Government assembled these wives in Moscow to work out a program for them. The women organized an association, open to the wives of managers, engineers, and high-paid industrial workers, and agreed to conduct volunteer, unpaid work around factories and mines. Their duties included inspecting the restaurants and quarters of workers to see that they were kept clean and "cultural," to use a common Russian expression; organizing courses in art, music, and domestic science for the wives of workers, and otherwise performing what we call social service in America. The organization of this association seemed to mark the close of the period, which really started in 1929, during which the authorities frowned upon women who had no regular paid jobs.

I don't want to give the idea that women are being pushed back into the home and out of heavy industries. In theory, at least, they are still as welcome as ever in the mines and mills. The law provides penalties for industrial managers to refuse to employ women on an equal basis with men, and to give them the same pay. But in practice, Soviet industrial managers are naturally not anxious to have their payrolls overloaded with women. These managers are between the devil and the deep blue sea in this respect, as in many others. They are under obligation to show substantial profits in their enterprises, to cut down labor costs and increase production. This is almost impos-

sible to do if they have too many women workers who take time off on full pay to have babies. So industrial managers, if they are smart, contrive in one way and another to avoid hiring too many women.

In some ways, the Soviet attitude toward women's equality seems to be more logical than our own. They say that women must pay for equal privileges by assuming equal responsibilities. So long as this principle is enforced, there doesn't seem to be much danger of a matriarchy growing up in Russia. So far, women have reached very few of the highest posts in any line of activity. But in the mines an increasing number of women are becoming executives and foremen, and male workers are learning to take orders from them without grumbling.

I have been interested to note that Soviet women in the mines and mills, even when performing the dirtiest and most severe manual labor, manage to retain their feminine appearance. At work, the women often wear trouser outfits resembling ski suits, and these clothes are quite becoming to them. But as soon as they get away from work, they take off their work clothes and get back into skirts. The Soviet women don't show any tendency to become like men just because they perform more of what is called man's work in most other countries.

Just as Soviet men and women are treated equally in free labor, so they are also impartially assigned to forced labor under police supervision if they offend the authorities. The prison work-camps contain women workers performing the same manual tasks as men. Women prisoners have helped to build railways in the Far East in temperatures 80° to 90° below zero, and they have also helped to dig canals and construct power stations.

The wives and daughters of kulaks usually accompanied them at forced labor in some of the mines I supervised, and they sometimes also worked in the mines. These women had worked hard in the fields, and thought nothing of performing manual labor. They were not compelled to work in the mines, but were permitted to do so, and preferred to eke out their husbands' modest earnings. In this way, thousands of Soviet peasant women got their first training for industry, and many of them later went into mills and factories as operators.

Kazak women, wives of former herdsmen, also went to work in some gold mines with which I was familiar. They were seldom capable of performing more than unskilled labor. As for Mongol, Yakut, and other tribal women, I have never seen them at work in mines. The Kazak women were either more enterprising or more needy. These Kazak women, although not very useful, were entitled to all the privileges provided for working women by law; they received their full two months with pay for childbirth.

My wife and I can testify, from our own experience, that many people in the outside world have an exaggerated impression of the relations between men and women in Russia. The old story about the "nationalization" of women, started soon after the Revolution, has been kept in circulation ever since, and other equally false reports have somehow gotten around.

Soviet publications themselves are partly to blame for these tales. Communists have controlled all newspapers, magazines, and books in Russia for twenty years, and they are accustomed to think and write—or at least were until a few years ago—like the radical agitators in our own big cities. They took pleasure in making fun of bourgeois mar-

riage customs, boasted that they were breaking up the old-fashioned family and that soon children would be taken away from their parents and brought up properly in state institutions.

As for our family, we didn't come in contact with people holding any such ideas from the beginning to the end of our stay in Russia. Our Russian friends, in mining towns and in Moscow as well, were as home-loving and respectable as the American families we had associated with. They were mostly engineers, and Soviet engineers in general are hard-working, conscientious men, anxious to do a good job and with small energy left over from their work. They lack the time or desire to lead fast lives.

It is my belief that the vast majority of Russians are the same kind of people as we knew, no matter how much nonsense about the destruction of the family and the breakup of home training for children was published in Soviet newspapers and magazines a few years ago. The extreme Communists who wrote this stuff didn't last very long themselves, and their ideas are not approved by official circles today. These extremists couldn't last, as I see it, because the majority of Russians had no sympathy with their wild ideas.

At any rate, from what we saw, Russia is full of respectable married people, just as anxious to do well in their jobs and help their children to become educated and get a good start in life as their counterparts in this country. And I should say that sooner or later these people will set the standards of conduct in Russia because they are in the majority.

The loosening of family ties, like the wholesale use of women at hard labor in industry, was probably a tempo-

rary and passing phenomenon which accompanied the change-over in Russia from an agricultural to an industrial country. But now that the foundations of industry have been built and the Second Revolution, like the first, has become more nearly stabilized, social relationships are hardening again. The Communist extremists, who wanted to abolish marriage and respectable family life and the care of parents for children, have lost their prestige and a new kind of respectability is emerging which sometimes seems almost as extreme in the one direction as the previous ideas were in the other.

In one matter I always sympathized with Russian families, and that was the indignities they had to put up with at the hands of visiting tourists in such cities as Moscow. I am sorry to say that Americans were among the worst offenders. Tourists seemed to conduct themselves like amateur zoologists, who had obtained special permission to study the habits of the Russians, whom they treated like animals in a zoo.

The tourists would approach Soviet guides, acting as if they were keepers, and say: "Today we want to see how the workers live, how they eat, how they take care of their young." Groups of curious foreigners would come along with a guide, and break into some private room or apartment without so much as a "by your leave." They would poke around and ask questions which would have made me throw them out on their ear. But the Russians were always patient. I suppose they had to be; their officials would have frowned upon any outburst.

I have heard that slum families in our big cities sometimes have to put up with the same treatment from social service workers and "slummers." Well, in that respect,

Russian city dwellers are all treated very much like slum dwellers. The rush to the cities has been so great in recent years that the authorities will require years to catch up with housing requirements. Most families live in single rooms, and share baths and kitchens with several others. A very small proportion of city families have any privacy, and the Communist politicians and their assistants, like our social service workers, are constantly visiting all the people, prying into their private affairs, and instructing them what to do and even what to think.

XXI. THE GREAT STAKHANOFF MOVEMENT

In the autumn of 1935 the Russians started their Stakhanoff movement, which seemed to attract as much attention as anything they have done in recent times except their purges. The Bolsheviks, who have a highly developed talent for promotion, introduced this movement with all the ballyhoo of a thousand combined circus press agents. The uproar in Russia was sensational, and was quickly echoed in the foreign press. Before long, experts of one kind and another began to interpret the movement as they saw it, and some of the interpretations were pretty funny to those, like myself, who were helping to put its principles into practice.

According to the official story, the Stakhanoff movement was started by a husky coal miner of that name, who was not satisfied with the amount of coal he was mining, and made up his mind to figure out some method of producing more. After trying out several methods, he suddenly hit upon one which made it possible for him to mine not only more coal than he had been doing before, but fifty or sixty times as much. Pleased and excited by his discovery—so the official story goes—he began to teach his methods to other miners, and soon the whole shift was producing several times more coal than before.

The Stakhanoff methods finally came to the attention of the authorities, who announced that they were a great new

discovery which would enable Russia to overtake and surpass the production of all other industrial countries within a very short time. The Communist General Staff in Moscow gave orders to its press agents to ballyhoo the Stakhanoff movement with all the resources at their command, and at the same time ordered all engineers and industrial managers to figure out ways and means of applying the methods to their own industries.

It is difficult for an outsider to imagine what the propaganda machine in Russia can do when it is turned loose on a single subject. American advertising men or press agents must turn green with envy at the thought of it. The Bolsheviks control every newspaper, every magazine, every publishing house, every billboard, every motion picture and legitimate theatre, every film producing company, every radio broadcasting station, every lecture hall, every school and university, every club and social organization.

When the Communist General Staff gives orders for universal promotion, as they did in the case of the Stakhanoff movement, the country simply hears of nothing else for days or even weeks on end. It is no wonder that the Russians themselves got the idea that they have developed something earth-shaking, and that thousands of foreigners were taken in by the uproar. Before long, so much artificial excitement was stirred up that even the men directing the promotion probably believed everything they said.

Foreign experts began to interpret the Stakhanoff movement according to their political views. The right wing experts decided that the Stakhanoff movement marked the nation-wide introduction of speed-up methods into Soviet industry, methods they declared had been successfully opposed by labor unions in other countries. At the other ex-

treme, foreign left wing economists confirmed the official Soviet announcement that the Stakhanoff movement represented unique and original ideas for increasing industrial production—ideas which could have been developed only under a socialist system.

Inside Russia, whole libraries began to spring up describing various phases of the Stakhanoff movement, and Soviet publishing houses hurried into print with dozens of books and pamphlets which showed more evangelistic enthusiasm than genuine comprehension of the aims and principles of the movement. For several weeks, Soviet newspapers gave up most of their space to this movement, and new magazines were started dealing with nothing else. During this period, I saw railroad station bookstands whose entire stock in trade dealt with "Stakhanovism."

Stakhanoff, the miner, meanwhile had been turned into a national hero, and imitation Stakhanoffs were springing up in all other industries. They were kept so busy giving interviews and being photographed that they had no time for their usual work. They were taken on tours of the country, being advertised and pushed around like movie stars or prize fighters in the States. The Russians were worked up into a sort of religious frenzy over this movement. They tried to introduce Stakhanovism, as they called it, into every kind of work. The papers reported that it had been successfully organized by workers who cremate dead bodies. Pamphlets were put out to show how bookkeepers and school teachers and farmers and even housewives could adapt the movement to their own work. But after a few weeks, most nonsense of this sort was quietly dropped, as the Russians usually do after such spells.

The Stakhanoff movement was surrounded by so much

promotion inside Russia and was the subject of so much faulty and controversial interpretation abroad that I doubt if even most of those who have written about it still have any idea of what it was all about. I feel sure that many Russians have never grasped the simple principles which Stakhanoff and his imitators used in their work, and which the authorities ballyhooed in order to sweep aside some of the archaic Communist notions which still persisted in Soviet industry even though it should have been clear to any sensible person that they wouldn't work.

I have been asked whether I believe that this movement really started from the bottom, developing spontaneously from some discovery made by Stakhanoff, or whether Stakhanoff was just a symbol used by the Communist General Staff to initiate changes in industrial practice which they had been preparing for some time. I think that Stakhanoff probably hit upon some simple principles which struck the attention of the authorities, and which they may not have seen in just that light before. But the Stakhanoff movement was obviously steered from the top, and enabled the Communist General Staff to send up a smoke screen to cover changes in their theories and practice which might otherwise have been embarrassing from their point of view.

Stakhanoff made the simple discovery that under the special conditions which prevailed in Soviet industry he could get through a lot more work by organizing his mining operations differently. He told the foremen and engineers in his mine that if they would provide him with small tools and equipment and give him all the helpers he needed, he could get out many times more coal than he and his helpers could produce separately and without the assistance of foremen and engineers.

The engineers prepared a special mine face for him, they laid out his tools and equipment for him, his helpers stood ready at hand to give him any assistance he needed, to the point of handing him any necessary tools, and he set up one record after another. Of course the production was not his own alone, but that of his brigade, which included himself and all of his helpers, plus the constant attention of foremen and engineers.

In other words he was guaranteed a ready place to work in, with all tools on the spot so he could spend all his time at productive work. Under the former *Udarnik* scheme, stress had been placed on greater physical output by the workers, while in this stress was placed on better supply and more specialization of duties of each worker, plus the piece-work plan.

A well-trained engineer, studying the methods used by Stakhanoff, would immediately see the principles which were at stake. There was nothing unique or original about them; from the engineer's point of view, they were no more and no less than the application to Soviet industry of common sense methods which have been taken for granted for generations in other industrial countries, but had been resisted, for one reason or another, by the extremist section of the ruling Communist Party in Russia.

One of the weaknesses of Russian engineers is their tendency to get their information from books rather than from direct observation, their tendency to be more theoretical than practical. Many of them acted true to form in the case of the Stakhanoff movement. They tried to comprehend the principles of the movement by reading the flood of books and pamphlets published about it, rather than by observing what Stakhanoff and his imitators had

actually done. Very often the tendency was to look on it as simply requiring greater physical output of the laborer. At the same time, they tried to apply principles which would work well enough in mining to entirely unrelated industries where they were bound to fail and which only served to disorganize industries which were beginning to get a fairly good start.

I have mentioned that our Gold Trust was well in the lead among Soviet industries in such matters as fulfilling production plans and reducing labor costs. When the Stakhanoff movement came along, our engineers ignored the mushroom literature, which was more confusing than enlightening, and looked at what these shock-workers actually had done. It became clear to us that most of the details of the new methods had been applied in our mines and mills for some time, whenever we had been allowed to do so. We welcomed the movement, because it was obvious that the authorities would now permit us to use certain methods which had hitherto been taboo.

The Stakhanoff movement never put the Gold Trust off its stride, as it did some other Soviet trusts. Even in coal mining, where Stakhanoff worked, the movement finally failed completely, so that coal production in 1937 was so far behind the amount planned that most other phases of Soviet industry were held up for lack of fuel. We never had such difficulties. I may be attacked for saying so, but it is the plain truth that the most useful principle in the Stakhanoff movement was the insistence that engineers and foremen should be held responsible for keeping workers constantly supplied with small tools and equipment. The disappearance of small tools from Soviet mines, mills, and factories, whether from theft or carelessness, was one of

the most annoying and most disrupting occurrences in industry, and still is, to some extent.

Stakhanoff told his foremen and engineers that they must keep him supplied with tools. In other words, he made them responsible for this, and refused to accept responsibility for gathering up his own tools. This principle was fundamental in the so-called Stakhanoff movement. Before that, individual workers had to look out for their own tools, and wasted a lot of time doing so. There was such a shortage of tools, and they were consequently so valuable, that it was very much worth while to carry them off.

In all advanced industrial countries, small tools are so numerous and so widely distributed that they are no longer worth much. Most miners in Alaska, for instance, have plenty of their own tools and are not looking for a chance to appropriate some. But in Russia, especially at the time the Stakhanoff movement started, the general shortage of tools tempted workers to carry them off from mines or factories. If a Soviet worker laid down a pick or shovel and turned his back for a moment, he was likely to discover when he turned around again that his tools had disappeared. And his tools could not immediately be replaced, because Soviet enterprises rarely had much of an additional supply on hand.

Soviet tool factories never kept pace with the demand, and if a mine or mill ran short of tools, it might be some time before it could get a fresh supply, and meanwhile work would be held up and production reduced. Engineers and managers had become so discouraged trying unsuccessfully to keep tools on hand or get new supplies that they developed a tendency to throw up their hands and do noth-

ing about it. And workers were always wasting valuable time on the job watching their tools to see that they weren't stolen, locking them up whenever they left work even for a brief time, and losing more time getting them out of lockers.

I had tried to persuade Russian managers that this problem could be solved most quickly by flooding the country with small tools. I told them that if they would start more of their factories making small tools, they would soon reach the saturation point, as we had done in the United States, and there would be so many tools in circulation that workers would no longer be strongly tempted to carry them off. But I didn't manage to put this idea across with the proper authorities.

The Stakhanoff movement made engineers and foremen responsible at all times for keeping workers provided with tools. For this reason, many engineers and foremen protested against the introduction of the movement, because they guessed from bitter experience that it would be impossible for them to keep tools on hand, and that they would be blamed for any shortage.

But the authorities, in their customary brutal fashion, made quick work of such protests. They held a few demonstration trials in some of the mining districts, and a few engineers and foremen were sentenced to long terms in prison for obstructing the Stakhanoff movement. After that, the protests died down.

A great many Soviet engineers were a long time catching on to the simple ideas behind this movement, and got into a lot of trouble as a result. In my opinion, they let themselves be bewildered by the mass of pseudoscientific hogwash which was printed about the movement, and were

never able to dig down to essentials. I don't blame them. If I had tried to figure out the principles at stake from the literature about it, I would have been bewildered too. As a matter of fact, I doubt if hundreds of Soviet engineers understand these principles yet.

Soviet newspapers at the time published some accounts of workers who opposed introduction of the movement, and these accounts were naturally taken as evidence abroad that the movement was ordinary speed-up and was being introduced against the wishes of Soviet workers. I certainly don't know why any worker should oppose the movement if it were properly introduced. The Stakhanoff movement is all in favor of the worker. If engineers and foremen do not provide tools, workers can go off with no further responsibility for the day's work. If workers get their tools, they make much more money.

I never saw the slightest evidence of opposition to the Stakhanoff movement among our workers in the Gold Trust, where our engineers understood the simple principles involved from the beginning, and introduced the system properly.

In general, the Stakhanoff movement introduced no practices which were not completely familiar to me in my work in Alaska before I went to Russia, or to any mining engineer with experience in western industrial countries. There were a few minor innovations in the movement, the principal one being a very strict division of duties.

For example, in Alaska metal mines the same miner may first bar down his working face, then drill a round of holes, do his own blasting and sometimes his own timbering as well. In Russia, the drill operator comes on the shift and finds his machine all prepared for him by other work-

men. He sets to work at once, and does nothing but drill holes the whole time he is on shift. Other miners confine their work entirely to the simple operation of barring down the working faces and making them safe; timbermen do nothing but timbering, and all blasting is done by separate fire-bosses.

Such a high degree of specialization has not been applied in most other countries, although I believe a few individual mines have experimented with similar systems. The system is well enough suited to the special conditions in Russia, where workers are still inadequately trained, but I should not regard it as necessary or desirable for mines in the United States, or any advanced industrial country. Our supplies are better organized, we have abundant tools, so that no miners take them home; or if they do, they can be quickly replaced.

Specialization also is useful in Russia, whereas it would not be in our country, because the Russians have such great differences in pay between skilled and unskilled workers. The Stakhanovists, or skilled workers, perform the operations which require some skill, while their helpers, or the unskilled workers, do the simple tasks, which take no great skill and some time. In western countries, there is not enough difference between the ability of skilled and unskilled miners to make it worth while to divide duties in this fashion. In Alaska, for instance, all miners can perform any of the operations well, whereas in Russia only part of the miners can do so. The same is true of workers in other Soviet industries.

It will be a long time before the Russian worker will approach the American worker in average skill, and the Stakhanoff methods may therefore be useful in Russia for

many years to come. When I left Russia in 1937, the tendency was to emphasize and develop an even greater degree of specialization, and this, incidentally, draws a sharper line between skilled and unskilled workers, both in pay and prestige. I doubt whether it will be worth while to retain the system after the proportion of skilled workers has been raised to the level already attained in western industrial countries.

A great deal has been written, both inside and outside Russia, about an alleged connection between the Stakhanoff methods and socialism. To me, this seems to be sheer nonsense. I can't see any possible connection. The movement and its methods were worked out and proved to be pretty useful, because the average skill of the Soviet worker is so low. There is nothing surprising about this, and nothing to be ashamed of, since Russia was a predominantly agricultural country ten years ago, and has had to train millions of workers simultaneously to operate unfamiliar machines. The left wing writers who try to conceal the inferior skill of Soviet workers under smoke-clouds of talk about socialism are showing up their own cheapness, apparently being ashamed of something without reason. At any rate, most of the Stakhanoff methods would never serve any useful purpose in America, no matter how much socialism we get. And the same methods would do very well in Russia, better in my opinion than they do at present, if Russia had capitalism.

The Soviet industrial worker has been gradually increasing his skill and output since I first watched him at work in 1928. I have already told how the first Russian miners whose output I measured were producing only about 10 per cent of the average output in Alaskan mines. From the

engineer's point of view, almost everything was being done wrong in the first gold mines I inspected at Kochkar. There was no standard fixed for a round hole, blasting supplies were unsuitable, timbering and tool-sharpening were unorganized. At that time, almost none of the workers really knew their jobs; compared to those times, the Soviet workers of today are master workmen.

In 1928, too, the mines were constantly tied up by labor regulations. When I proposed certain changes, it was first necessary to call inspectors, show them what I wanted and how it would make things better for the men, not worse; and then persuade them to recommend changes in the labor laws. The miners, too, did not want to change their accustomed methods, and some of them had to be almost forced to try out some of the schemes I proposed.

The Soviet labor regulations at that time served chiefly to hold down production, not to safeguard the workers. For example, I was only permitted to order four holes to be blasted in one shaft at a time, and only by hand. In some cases, where we had to blast as many as seventy-two holes, a great deal of time was lost by handling only four holes at a time, and repeating the process until the operation was completed. Even in tunnel work, the law permitted only eight holes to be blasted at a time, so that a great deal of time was lost in ventilating and mucking.

It took me some time to persuade Soviet labor inspectors that these regulations were not necessary to safeguard workers, and were extremely costly to production. In Alaska, we were permitted to blast as many holes as we desired, so long as the fuses were made long enough to permit the workers to get away in plenty of time. The Russians regulated the number of holes but not the length

of the fuse, the latter being far more important as a safety measure. And many of their other regulations were equally cumbersome and inefficient as safety measures.

To put it in a sentence, we were allowed to use our common sense in Alaskan mines while the Russians had piled up a mass of very strict and complicated regulations governing safety which engineers or workers might get into a lot of trouble by ignoring. And yet there were fewer accidents in Alaskan mines, and production was vastly easier to obtain.

I will admit that experience makes a lot of difference in mining, both in workers and engineers. In Alaska, our miners usually had long years of experience behind them, and were thoroughly familiar with all the processes of mining. And, of course, our engineers were well trained. When I went to Russia very few workers knew their jobs well, and a lot of them still don't. In addition, we had much better equipment and materials in the mines of Alaska. Soviet-manufactured dynamite, for example, was and often still is very inferior to foreign-made dynamite. It will freeze at about 9° plus, Centigrade, after which it is very dangerous to handle, whereas the dynamite we use in our colder climates will only freeze at 20°-30° below.

In Alaska, we had very few regulations, but took care to observe those we had. In Russia, they have a hundred times as many regulations, but engineers, foremen, and the workers themselves are extremely lax in enforcing them. During the last year or two, hundreds of engineers and foremen have been arrested on charges of counter-Revolution because they neglected safety regulations. I can testify that safety regulations were often ignored, but I

doubt if most of the offenders were counter-Revolutionists. They were just careless.

The Stakhanoff movement, as distinct from expert definitions of it, proved to be very useful in Soviet industry because it served as an excuse to sweep away a lot of the impractical restrictions imposed in previous years by Communist theorists, which had long since proved practically unworkable, but which many Communist managers refused to give up. Among such restrictions were those upon piece-work and contract labor.

When I came to Russia, they were paying straight day wages in the mines, and getting very little work out of their men as a result. From 1929 onward, we introduced piece-work and contract labor into our development work, but hostile Communists blocked attempts to introduce them into exploitation. Although the Stakhanoff movement really is not based alone on piece-work, it was made to serve the purpose of introducing this method of payment for every kind of work in Russia, even office work. They began to pay bookkeepers by the piece, and everybody, including actors, doctors, singers and gold prospectors, were given norms to fulfill, and promised higher rates of pay above these industrial averages.

I suppose this was what gave the movement its reputation of speeding-up abroad, and it is possible that trade unions in democratic countries would refuse to accept the methods of setting up norms and piece-rates. The norms are worked out by the head office of each industry, usually located in Moscow. They are printed in books which show the general rate of work and cover all possible operations connected with the industry. In the Gold Trust, for example, the book of norms fixes rates of pay for all the

operations of mining and milling, of the various mining systems, with due allowance for the varying hardnesses of ores and rocks.

It is very difficult to figure out norms correctly, to cover all conditions and the engineers on the jobs were generally given a 10 per cent leeway. If a mistake is made, the men soon enough find it out in their pay envelopes and have the right to protest, with a good chance of having their norms corrected fairly soon. But the workers really have no say in fixing the norms and piece-rates, and free trade unions would insist upon some voice. The trade unions in Russia are not likely to buck the management on any such question. Their officials are usually members of the Communist Party, just as most of the managers are. So they take their cue from the Communist General Staff.

XXII. THE LAND OF EURASIA

IN April, 1936, I started off again on my travels, and for the next sixteen months I kept almost continuously on the move, revisiting most of the places in both European and Asiatic Russia which I had seen before, and adding some new regions to my collection. I looked over most of the important gold mines in the Urals, north and south; pushed on to the new fields opened up beyond Lake Baikal in the Far East; motored over new highways built by the Gold Trust in Yakutia, the great northeastern Arctic province; and ended up in Kazakstan, close to the Chinese border.

I had been shuttling back and forth between Moscow and the gold fields in Europe and Asia since 1928, and had watched a good many of the Asiatic regions develop from virgin stretches with few or no inhabitants. I was struck, as I moved rapidly around on this trip through Asiatic Russia, by the notable changes made in this territory since I had come this way before. Hundreds of thousands of people were moving into unoccupied lands, some voluntarily and others not. One of the great treks of history was taking place here. Men and women and children were being shifted about in numbers sufficient to build up whole towns and cities almost overnight.

There are not many places where one can see such a mixture of races. One hundred and sixty-eight distinct races and tribes form the population of Russia, and all of them seem to be represented in the melting pot which has

been created by the colonizing of the country between the Ural Mountains and the Pacific Ocean. For that matter, all of Russia has become a new kind of melting pot, different from our own country because in this case the races of Asia and Europe are being thrown together as never before.

Russia has one colored person (dominantly yellow or brown races of Asia, rather than Negro) in its population for every two white persons. Until recent times, the Asiatics and the Europeans tended to keep apart, with the white races sticking mostly to Europe, while the colored races occupied their own ancient lands in the south and east. The Great Russians, with a little more than half of the whole population, easily dominated the rest. They had conquered such ancient peoples as the Georgians and Armenians in the south, the Kazaks and Kirghizians and Turki tribes of Central Asia, the Buriat Mongols and Tartars in central and eastern Asiatic Russia, and such peoples as the Yakuts in the north.

Before the Revolution, the Asiatics were permitted to follow their old customs and remain in their own regions without much interference. I have described how the tribesmen kept very much to themselves and lived as they had done for centuries even as late as 1928. They were suspicious of the white man, having learned by experience that they didn't profit by acquaintance with him.

All this was changed, as I have suggested, after the Second Communist Revolution got under way from 1929 onward. The Communists decided, among other changes, to break up and reorganize completely the old customs and social ways of the Asiatic tribes and races, and they carried out these changes very thoroughly and systematically. Members of these tribes were pitched, willy-nilly, into

the melting pot, and something strange and wonderful has been cooking since.

The Russians, as I understand it, have been a mixture of Europe and Asia for several centuries. The Mongols ruled the country for many generations, and a large number of the white persons in European Russia acknowledge Asiatic blood in their veins. I have heard a Russian woman tell with a smile that her ancestors were Tartars, a branch of the Mongol race, in order to explain her high cheekbones. Russians seem to have no more feeling about Asiatic blood than Americans do if they have American Indian ancestors.

An English official who has worked all his life in Central Asia visited Moscow while I was working in Russia. He told a friend that Russians have always gotten along better than Englishmen with Asiatic races, both before and since the Revolution, because the Russians simply are not conscious of racial differences. Englishmen, on the other hand, are seldom able to break down the barriers in their own minds.

An American acquaintance in the Far East was friendly with a Mongol prince who was educated in a military school for sons of aristocrats in old St. Petersburg. The prince told him that he always recalled his student days with pleasure because he never encountered the slightest evidence of race feeling among his Russian fellow students. When he went to England, the prince said, he was treated politely but as a complete outsider. But the Russians treated him like one of themselves. They introduced him to their sisters and took him around to mixed parties without seeming to be conscious of the difference in color.

The American Negro singer, Paul Robeson, visited

Russia several times while I was there, and finally decided to put his twelve-year-old son in school in Moscow. When some of the newspapermen asked him why he did this, he replied that he wanted to keep his son wherever he might expect to encounter the least prejudice against Negroes simply because they are Negroes, and he believed Russia has less of such feeling than any other country. Robeson said he had kept his son in France before, but had decided there was less race prejudice in Russia than in France. Robeson seems to have gotten the idea that the lack of prejudice against colored races in Russia is entirely due to Bolshevism. But there seems to have been very little such prejudice in Russia before the Revolution, with the exception of the special anti-Jewish feeling.

However, I cannot speak with authority about pre-Revolutionary Russia. I do know that since 1928 the Soviet Government has vigorously enforced its laws making the slightest demonstrations of race prejudice criminal offenses. I saw, during the years I traveled among the Asiatic tribes, that no offense was likely to be punished more swiftly. In fact, the authorities leaned over backward in this respect, and Russians took care not to get involved in a dispute with members of minority races, because they knew that Soviet courts would give them the worst of it.

I am sure that mining and other industries located in minority republics have been held back because the Communists strictly enforce a regulation that native men and women must occupy at least half the jobs in any local industry, and half of the managing jobs as well. This regulation, in my opinion, has been carried to ridiculous extremes. I have come up against incompetent, ignorant, and arrogant native tribesmen holding down executive jobs in

mines and mills for which they were entirely unsuited. Their Russian subordinates, who were trying to cover up their mistakes, apparently were afraid to remove them for fear they would be accused of chauvinism, a capital crime in Soviet law.

The same principle is observed in the political field, and large districts have been terrorized or at least retarded in their proper development because the highest political positions have been turned over to illiterate Asiatic tribesmen. Native officials usually have their Russian secretaries, who probably keep control in their own hands. But it requires a lot of patience to deal with these people, especially after they have gotten the idea that they hold the whip-hand, and that Russian underlings will not dare interfere with them.

Occasionally, as in the recent purge, the Moscow authorities get so annoyed by the stupidities or glaring graft of native officials that they arrest them right and left, shoot many of them, and send the rest off to concentration camps or forced labor. It is not easy to prevent Asiatics from taking graft when they hold official positions; graft has been a recognized perquisite of office in Asiatic countries for centuries. But the Soviet authorities are doing their best to build up a tradition against corruption in office, and they have made some progress by frequent displays of swift punishment for such offenses.

It is natural to ask why the Communists, who now operate all Soviet industry through their control of the Government, apparently work against the state's own interests by appointing so many natives to important positions in minority republics and filling up new state industries with incompetent and untrained native labor. The answer is that

no one can understand what the Communists are driving at in Russia unless it is realized that they are reformers, first and foremost.

Being reformers, the Communists want to change the world completely, reorganizing it to suit their own ideas. The rest of the world outside Russia has made it clear that it doesn't care to be transformed along these lines at present. So the Russian Communists since 1929 have left the outside world more or less to its own devices but have increased their zeal for reforming their own population. As each social group is broken up, the Communist General Staff adds to its power, and extends its reforms a little further.

So far as the Asiatic republics are concerned, the Communists want to make them more or less European. They have the idea that no community can be progressive until it has been industrialized. An agricultural community, they say, and especially a nomadic agricultural community, will always remain backward until it develops its own industrial workers. Like city-dwellers generally, the Communists have contempt for the life and habits of farm populations. The Asiatic tribes of Russia have been largely agricultural; their industries have been limited to handicrafts. The Communist reformers are pushing them as speedily as possible along paths of industrial development.

For this reason, they have sometimes opened up industries in Asiatic republics which were not economically justified, chiefly in order to transform Asiatic tribesmen into factory hands and machine operators. The Communists apparently think they are doing Asiatics a good turn by taking them off the steppes and away from their

fields and teaching them to work underground in mines or to tend machines in factories.

At any rate, the Asiatic regions of Russia with which I have been familiar for so many years have been transformed almost beyond recognition during the time I have known them. The change-over from an agricultural to an industrial manner of life has been accomplished in these regions in a remarkably short time. Hundreds of thousands, perhaps millions, of Asiatics have been pushed into new forms of industrial labor, and a large proportion of those who were illiterate have been taught to read and write, and provided with new alphabets and new books in their own languages where none existed before. So far as possible, the Asiatic tribes have been given schools, hospitals and clinics, libraries and theatres equal to those in European Russia.

The Communists make a great point of their belief that all races are equal in potential ability, and that one can be as good as another if it has the same opportunities. Holding this belief, they are determined to give the same opportunities to all races and tribes in Russia at the earliest possible moment. They have distributed a disproportionate amount of their available funds for education, public health, and sanitation, in the Asiatic regions where these things had been most neglected.

Both the Asiatic and the European populations of Russia were milling around almost incessantly during my stay in that country. In the first place, the reorganization of agriculture has driven millions into industry, some coming voluntarily, others forcibly under police supervision. Then the authorities have done their best to encourage colonists to fill up the empty spaces of Siberia, Kazakstan and the Far East, either by offering special privileges to farmers or

gold prospectors, or by forcibly moving whole villages from European Russia. The Government has such complete power over its people that it can, and does, pick up whole towns and set them down again in some other section, whether or not the persons concerned want to be moved.

The system of forced labor has shifted Europeans into Asia and Asiatics into Europe. Some of the tribesmen living near the Chinese border may be sent to dig canals in the frozen Arctic or near Moscow. When the Moscow-Volga canal was being dug a year or two ago, those of us who lived in Moscow would ride out occasionally to watch the work. A large number of these workers were Asiatics. I recognized Mongols, Koreans, Cossacks, Yakuts, Tartars, Armenians, Georgians, all mixed up together in the prison camp with the various white races of European Russia.

Everywhere one goes in Russia today, one sees the mingling of races. I am told this was also true before the Revolution, but not to the same extent. Thousands of smart young men and women from the various Asiatic races and tribes come to Moscow every year to study. The universities and institutes in Moscow and the other larger cities of European Russia are crowded with Asiatic and Near Eastern students. They are given special privileges, and their lack of educational qualifications is overlooked. After a few years, these young men and women go back to their own regions to teach European civilization to their own peoples.

Out in the Asiatic republics, there is the same mingling. Thousands of Russian and Ukrainian young people are volunteering to work for a period of years in Asia, as pioneers for their own brand of culture. Other thousands of

Europeans have been sent to these regions as free exiles, under compulsion to spend five or ten years in Asia. Often the families of exiles accompany them, and their children may settle down in Asia. Recently, in order to clear the border regions adjoining Finland, Poland and other countries on the west, the authorities have shifted dozens of villages en masse to new lands in Siberia, where they are given credit and materials to build houses and community dwellings for themselves and begin life over in Asia.

In Russia today, as never before, Asiatics and Europeans are being thrown together as members of the same community. Already there are a considerable number of mixed marriages, and strong measures are taken to make sure that no social prejudice is shown against such marriages, and that the children get at least equal advantages.

The Soviet authorities deliberately encourage such marriages. They throw European and Asiatic young people together as much as possible, and Soviet scientists frequently publish articles declaring that children of mixed marriages are likely to be superior. A Soviet expedition recently visited the region beyond Lake Baikal, in the Buryat-Mongolian Republic, to study a group of half-caste Mongols which has lived in that district since the middle of the nineteenth century. Prof. G. I. Petrov, Leningrad anthropologist, reported:

"Anthropological study of this people of mixed blood, conducted by a specially organized expedition, showed that they are healthy, physically strong, very fertile, capable, and energetic, as might have been expected, and without any hint of 'degeneration from cross-breeding.' "

The question of mixed marriages between colored and white races is one of the chief points at dispute in the

philosophies of Communists in Russia and National Socialists in Germany. As everyone knows, the Germans have started out to "purify" their race, while the Communist authorities in Russia appear equally determined to mingle the blood of their 168 races and tribes as freely as possible. If official encouragement and propinquity will do the trick, a new kind of Eurasian race may appear in Russia within a few generations.

The foundation seems to have been laid for such a race. One in each three of the population is colored, and the latter are given full equality in every respect. The white people in Russia have been remarkably free from prejudice against the colored races for generations, if not centuries. Now all social and legal discriminations against mixed marriages are being rigorously prohibited by law and custom.

However, if my impressions are correct, this mingling of European and Asiatic blood in Russia is not likely to go forward very rapidly. I have noticed that the Asiatic peoples still tend to keep to themselves, and are never really at ease in the company of Europeans. They come to mixed meetings, and some of them seem to enjoy it, but the friendliness which is assumed as a matter of policy seldom seemed genuine to me. Even the Kirghizean Communists, for example, seemed to be distrustful of their Russian colleagues.

To tell the truth, the tribesmen were always far more friendly to me, as an American from across the ocean, than to their Russian co-workers. They welcomed me with open arms, and outdid each other in efforts to show me hospitality.

I don't think this feeling about Russians is necessarily any evidence of Russian race prejudice; it may well be

true that Russians lack such feeling. But Asiatics have learned to fear and distrust Russians from a long way back. Before the Revolution, Russians exploited them, robbed and cheated them, sold them cheap vodka and treated them with good-natured contempt. During the Civil Wars, Russians confiscated their food and their animals and left them to starve; this seems to have been equally true of both "Red" and "White" armies.

And then, when the Civil Wars were ended, and things had gone almost back to normal again, Communist reformers came along with their ideas for breaking up the old Asiatic social order and substituting a new set of customs and manners which they believed were best for the Asiatics. The Communists, like other missionaries, have often not proved to be very popular with those they came to save. The Asiatics still have an uneasy feeling that the Communists are just another lot of Russians trying to put something over on them.

XXIII. THE GOLD RUSH GOES ON

ALTHOUGH I was not aware of it at the time, I did my final job of work for the Gold Trust in January, 1937, when I finished straightening out some difficulties encountered in the promising new gold mines at Balay, beyond Lake Baikal, not far from the Manchurian border. I had given the greater part of my thought and effort to the Soviet gold mining industry for almost nine years, and now I ended this period of my life, probably the most adventurous stretch of my career, without so much as knowing that it was over.

My wife had accompanied me on a trip from the Urals into the Far East which had started the previous July. We had visited all of the important gold mines near and beyond Lake Baikal, and found them very promising; we had made an interesting trip down the Shilka River, along which mining operations have been developed for years. In October, although it had become very cold, we continued our inspection tour through the Amur River districts and on into Yakutia, the great northeastern Arctic province.

At times on this trip we encountered temperatures as low as 80° below zero, but motor highways have been constructed in districts which were almost inaccessible a few years ago, and it is a much easier matter to go through the bitter cold in a closed motor car than in a crude sleigh pulled by reindeer.

In spite of low temperatures in these regions, it has been proved possible to continue mining and even dredging operations through all but the coldest weeks. The policy of training native tribesmen for mining work, Yakuts, Mongols and the like, has proved practical here because they find it easier to work in bitter cold. Many of them succeed as prospectors for the same reason.

Conditions in the gold industry at this time were very favorable. I meditated many times, as I toured these districts, upon the decided progress which had been made since I had gone through these same places seven years before. Dozens of important new mines had been opened up, most of them highly mechanized, and with cyanide and other mills as modern and complete as one can find anywhere. There were workmen and engineers now who knew their business thoroughly. I could remember the time when the few mines in operation were extremely primitive, and when practically no engineers or workmen were familiar with modern mining processes.

My wife and I set out on the return journey to Moscow in December, assured that conditions were satisfactory. But I received word en route that an unforeseen breakdown had occurred at Balay, and so I returned at once to help set things right. Having gotten things going again, I started back toward Moscow in January, after nine months of continuous travel and inspection.

But it seemed that I was not to have the rest which I had anticipated. I was greeted when I reached Moscow by the bad news that wholesale sabotage had been discovered in the Copper-Lead Trust from which I had been released in 1932. The Ridder lead and zinc mines in southern Kazakhstan, I was informed, were in a critical state, and I

was instructed to hurry down and see what I could do about it. I have already told how I reorganized these mines in 1932, and what I discovered there when I returned on this occasion, in 1937. Undoubted sabotage had occurred in high quarters, and this mine, which is one of the most valuable in the world, was very nearly lost. The business of rescuing it occupied me for several months, and was the final task of my Russian experience.

These mines were formerly the property of the Russian imperial family, like many other important mines in Russia, and their exploitation was begun in 1910 on behalf of British interests who had obtained a concession to work their lead, zinc and gold. These people had built a railway one hundred and twenty kilometers long in order to open up these mines, and had already installed modern machinery and constructed up-to-the-minute mills when war and revolution came along and upset all their plans.

The expensive plant never proved of much use, being badly knocked around in the Civil Wars and Revolution. When the Bolsheviks took over the mines, they spent enormous sums for new equipment, much of which deteriorated or was completely ruined through ignorance and deliberate sabotage. From the viewpoint of waste, it might have been better for all concerned if the mines had been developed by foreign capital. The Russians would have obtained as much as they have by the present régime, if not more, and it is unlikely that so much valuable ore would have been lost. But in spite of everything, the mines are so rich that they have been a source of important income for the Communists.

In some ways it was unfortunate that my last months in Russia should be spent working for the Copper-Lead

Trust, some of whose managers I had never trusted, and who, in my opinion, were deliberate wreckers. I should have preferred to do my last job, as I did my first, for the Gold Trust, where my experiences were invariably more pleasant. If I had spent my entire time in Russia working for the Gold Trust, I would have a more agreeable tale to tell.

However, this is primarily the story of Soviet gold. I was engaged by Serebrovsky, and really worked for him my whole time in Russia, and his chief interest during all this period was gold. My excursions into copper and lead brought me most of my grief in Russia, and Serebrovsky never had such close control of these metals as he did of gold. The Gold Trust may properly be described as his creation, and I should be content to be described as his "man Friday."

My description of the Soviet gold industry has been purposely generalized. The Soviet authorities are themselves secretive about details of this industry, and I have no desire to publish facts which might annoy them. That is not necessary for the purposes of this book.

It has been a favorite occupation in recent years, since the Soviets began to develop their gold-mining industry so rapidly, to speculate on the gold production figures. I have never been able to understand why the Soviet Government does not publish these figures, as other governments do. From my point of view, there is no reason why they should be kept secret. But the Soviet Government has some obscure reason for wanting to keep them secret, and since I worked for the Government professionally, it is not ethical for me to reveal these figures, although I learned them in the course of my work.

However, there is no harm in confirming, from my own knowledge, the Soviet claim to be in second place in world production. I watched them rise to that position during a very few years, passing the United States and Canada and being surpassed only by South Africa. And I can see no reason why they should not keep this position indefinitely. I know from my own observation that the Soviets could increase their gold production very substantially in the near future if they desired to do so.

I have read articles in American magazines arguing that the Soviets have about reached the limits of gold production, because their reserves are so small. This is not at all true. In the last two or three years some very important new placer districts have been discovered and opened up by prospectors. And I know personally of at least ten large lode mines and several dozen smaller ones which have been fully mapped and only await development.

During my last year or two in Russia, it seemed to me that the Soviet Government was not forcing the rate of increase in gold production so vigorously as in earlier years. They were deliberately slowing down the rate of increase, and the proportion of available capital being turned over to the Gold Trust had declined. I did not quite understand the purpose of this policy, but assumed that the Government was pursuing its customary program of rationing available capital, and that the threat of war both in Europe and Asia had caused the Government to divert larger amounts of capital to the armed forces and armament manufactures.

However, a plausible explanation was offered by Herbert Elliston, financial editor of *The Christian Science Monitor*, in commenting upon some magazine articles

which I wrote. Mr. Elliston looked at the matter from the viewpoint of finance, a field with which I am not familiar. He explained much more effectively than I could do why the Soviet Government may prefer to develop its gold more slowly in future, as it apparently had begun to do during my last year in Russia. If it follows this course, Mr. Elliston explained, it will only be serving its own best interests.

Since the Soviets started to develop gold mining in 1927, Mr. Elliston stated, their production has become the principal unknown quantity in the international gold market. They have pushed up in a few years to second place in world production, and experts differ widely about whether they can continue to advance and actually overtake South African production by 1940, as Serebrovsky and some others have claimed they can and will do. The United States, as the only government which pays a fixed price for gold, and Great Britain, which has joined in supporting the price of gold by extensive purchases since the end of 1936, are naturally keenly interested in what the Soviets are likely to do with their gold.

Mr. Elliston asked: "Suppose, therefore, that the Soviet mines keep on erupting progressively. What then? In the absence of any concerted policy on the part of the two buyers to redistribute it, they would become choked with the metal. . . . Arctic miners, working in a climate 80° below zero, would be digging up gold for reburial in the pleasant blue hills of Kentucky."

In 1929, Mr. Elliston recalled, gold experts said that Russian gold would save the world, since they believed a shortage was developing elsewhere. Now they say that Russian gold is the chief danger. If the Americans and

Britons stop buying gold, the gold market is likely to collapse and another period of monetary chaos will appear.

Mr. Elliston then made the important point that the Soviets, potentially the chief seller of gold, are just as much interested in maintaining its price as the two chief buyers. For gold production has become vastly important to Soviet economy, enabling Moscow to buy things from the West which she would otherwise have to do without or pay for with products of greater social use. Therefore, Mr. Elliston reasoned that the Soviets are not likely to flood the gold market or do anything to break world prices.

Although such matters are outside my field, that argument sounds reasonable to me, and perhaps explains, to some extent, why the Soviets have not seemed in such a hurry to force gold production recently. The Soviets certainly would lose heavily if they couldn't get a good price for their gold, or if gold were demonetized. They have poured tremendous investments of money and effort into the gold-mining industry since 1928, and this is one of the things for which millions of Soviet men, women and children have gone short of food, clothing, and all kinds of luxuries. This is because the machinery and plant and the services of foreign engineers in the gold industry have been paid for by agricultural and dairy products during a period when the Russian peoples were experiencing an acute shortage of such products.

Stalin and his associates apparently thought these sacrifices were worth making, so far as gold was concerned, not only because of the purchases which gold would make abroad as soon as it was brought out of the ground, but also because of its potential usefulness in case of war.

For years, the Russian leaders have based all their actions on the belief that they will soon be involved in war. They apparently started to build up a larger gold reserve in order to strengthen their military position. If gold were demonetized, the value of their gold reserve would of course drop to a small fraction of its present worth.

However, it seems to me that the Soviets may protect the world price of gold and still push ahead with development of their gold mining industry almost as rapidly as in the past. It is even possible that they may endeavor to attain production equal to that of South Africa by 1940, as Soviet papers on more than one occasion have suggested they intend to do.

The Soviets control their economy much more closely than any other government, because no other government owns and operates the whole economy of its country. It seems to me that Moscow could go ahead boosting gold production, without breaking down world prices, if they retain most of their gold as a reserve inside Russia and put it on the world market very cautiously.

I suggest this possibility because the Soviet Gold Trust has other purposes than the mere production of gold. I have previously indicated that one of its chief purposes from the beginning has been colonization of the gold bearing regions. Stalin and his assistants were chiefly interested in using the gold rush and other devices to open up the Far East and the border regions of Kazakhstan, so that the Japanese threat would be lessened. Gold production was a secondary consideration.

All through 1936, as I toured the outlying gold-bearing regions and visited the camps of prospectors and lessees and the larger mines operated directly by the Gold Trust,

I was impressed by the evidence that this gold rush, probably for the first time in history, was being kept at all times under firm control. Not one of these districts was being opened up without the full knowledge and active participation of the Government; every one of these hopeful prospectors, energetic lessees, and active miners was, directly or indirectly, an employee of the Government trust which was supervising and controlling the entire movement.

The control officers, so to speak, were the geologists. I have pointed out in a previous chapter that the Soviet engineer's status is none too agreeable, that he is ground between the upper and lower millstones of the belligerent workman and the annoying Communist politician. But the status of the Soviet geologist is another matter. I can understand why they are better satisfied with their lot than engineers.

The functions of geologists in the Gold Trust are the same as in gold mining elsewhere. It is their business to report new discoveries and map claims. They must also carefully study, evaluate and investigate fully every new discovery and give an idea of its future worth.

Soviet geologists are state employees, like engineers, but they have an easier time because they are less concerned with production and are less harried by Planned Economy. They are more free to pursue their investigations and researches, in some respects, than in the United States or other countries. If a government geologist in Alaska, for example, wanted to study a vein running through several pieces of property, he might have great difficulty in getting permission to do so. The owners of the claims, if they liked, could refuse him permission. The Soviet geologist is

a little king by comparison. He can make all the studies he wants to, without so much as asking the permission of prospectors or lessees. He can hold up production, if he likes, while he is making his studies.

Soviet geologists, at least in the Gold Trust, can work out the future value and extent of whole ore beds, can keep their finger at all times on the areas to which prospectors and lessees have been admitted. The geologists are supposed to watch the interests of the state, just as our government geologists are, but Soviet geologists can ignore the interests of the individual if they decide it is useful to do so in the state's interest.

A similar close control is exercised over miners, mill-operators, prospectors, lessees and all the other individuals who are taking part in the Soviet gold rush and the subsequent development of large mines and mills in the regions opened up. The Gold Trust is the sole "capitalist" in this entire industry, and it operates the industry as its "board of directors"—the General Staff of the Communist Party—sees fit.

The Soviet gold rush is certainly the most dignified gold rush in history, not because the men and women engaged in it are necessarily any better than those who took part in previous rushes, but because the Gold Trust, as the agent for the Soviet Government, has absolute control not only of all the land and all the ore below the ground, not only of all mining machinery and mills, not only of all stores and restaurants, but also of all the people. If a prospector or lessee incurs the displeasure of the Gold Trust, he might as well turn to another occupation. When he gets on the Trust's blacklist, he is through.

And the Gold Trust has an army of what we would

call social workers in the field, serving workers in its own mines and mills and also serving the prospectors and lessees. These social workers are more rough than ours; they are full of their own kind of ideals, sometimes sensible and sometimes not, very anxious to reform everybody. Soviet social workers have a great deal of power, and may blacklist men or women who do not come up to their standards of conduct. With the help of the Gold Trust itself and of the Communist politicians and the police, they see to it that this gold rush is the most orderly in history.

It is not easy for a rich man in Soviet Russia to spend his money. A friend of mine devoted an entire evening in Moscow to questioning a Russian jazz band leader, who was supposed to have the largest income in the country, about how he spent his money. The band leader admitted it was a lot easier to earn the money than to spend it. At the time, he was traveling around Moscow in a battered American low-priced automobile several years old. He said he had been trying to buy a better automobile for a long time, but couldn't manage it. He had bales of Government paper money, but the authorities wouldn't put him on the preferred list so that he could buy one of the few Soviet new cars, and wouldn't arrange any means by which he could get foreign currency to import a foreign automobile.

This band leader stayed with his family in one of the best Moscow hotels, but he admitted that he had used influence to arrange this. The hotel was always short of rooms, like all others in Moscow, and wouldn't have given the band leader rooms for any amount of paper money if he had not obtained a permit from some influential Communist politician.

It was impossible for him to buy such things as electric refrigerators or a good radio-phonograph, because Soviet stores don't stock foreign-made goods and Soviet factories seldom make first class products and never make enough of anything to supply the demand. His wife had to stand in line like other women to get a chance at such clothes as were for sale. The band leader said he couldn't possibly get rid of all the money he made, so he gave it away to relatives by the armful, and put what was left over into the state savings bank. But he didn't like to do this, because the bank paid him 4 per cent interest, and this merely increased his income.

The Gold Trust has been a little more helpful to its rich prospectors and lessees. Its special stores import more foreign goods than any others in Russia. Also they are able to get fairly prompt delivery on such Soviet-made items as pianos, bicycles, radio sets, and similar articles which are much more of a novelty and luxury in Russia than almost anywhere else. The people who find gold not only have more money than their acquaintances in other lines; they also are able to buy things with their money which the others can't buy for any price.

But if they make a really big strike, Soviet prospectors find it almost as difficult as the band leader to get rid of their cash, which they never think of saving, because most of them don't have much confidence in the permanence of monetary values, due to their sad experiences during inflation periods. After they have bought themselves the small amount of luxuries available, they have to scratch their heads to think of ways to spend their income.

It is no easier for them than for poor people to get permission to live in desirable cities such as Moscow, which

are so crowded that new residents must get permission from the police to move in, and the police don't hand out permits unless good reason can be shown for living in these cities. Some of them might like to live in resorts, like those in the Crimea and the Caucasus, but accommodations there are usually reserved for favored workers or Government officials and managers.

Soviet social workers endeavor to persuade lucky prospectors to use their money for community purposes. During a brief visit to Moscow in 1936 I ran across a veteran prospector, one of an artel of three men who had recently unearthed a pocket in a lode mine which netted them the equivalent of 800,000 paper rubles, about three hundred years' wages for an average worker.

This man asked me if I couldn't use my influence to help him buy an airplane and engage a pilot. I asked him what on earth he wanted with an airplane. "Well," he replied, "you know our mining camp. It is very progressive. Not long ago we organized an air club to help the Government train pilots for the next war. But we have no airplane and no instructor. So my partners and I agreed to pay for an airplane and engage a pilot if we can manage it."

That grizzled old prospector and his two partners would have to spend a good-sized chunk of their fortune on this project. But they had been induced to do it, partly because there are so few ways for them to spend their money, and partly because they have been given a touch of what we would call civic spirit.

XXIV. STALIN FACES EAST

MY last months of work in Russia were passed in the mines of southern Kazakstan, close to the border of the Chinese province of Sinkiang, country which has since become part of the setting for one of the greatest political dramas of our time, if newspaper reports are correct.

I don't pretend to be an expert on international politics—but these border regions between Russia and Central Asia became so familiar to me in the course of ten years that I naturally follow political events in that part of the world with especial interest. And I have had a few experiences which may throw some light upon what has happened all through Central Asia since I left Russia in the summer of 1937.

Judging by the articles and books which I have read dealing with this part of the world, it seems to me that too few writers appreciate the fact that Soviet Russia is primarily an Asiatic country. European writers, especially, seem to be interested in Russia only so far as its influence in Europe is concerned. But it looks to me as if Russia's influence in Asia is going to be far more important than in Europe or anywhere else.

Even geographically, Russia lies for the most part in Asia. If you take a look at the map of Russia, you see what a small part of the country lies in Europe. The Asiatic part sprawls all over the map, and you get an idea of its

real size only by putting it alongside the map of any other big country, such as the United States.

Tourists who rush into Moscow and Leningrad from Europe and then hurry out through Europe again have failed to get any proper conception of Russia, in my opinion, because they confine themselves to European Russia. Travelers from the Far East get a clearer idea. Their express train carries them along from Vladivostok day and night for seven days before they reach the Ural Mountains, which are the dividing line between Asia and Europe. Then, in only two more days, they find themselves in Poland. Travelers who make this trip at least understand that Russia lies mostly in Asia.

I am convinced, from my experiences with Russia and the Soviet peoples, that they are looking more and more toward Asia, not Europe. The Asian portion of their country is not only by far the larger part, but it is also the most hopeful part, the part which has not yet been filled up with people or developed, and which possesses some of the greatest natural riches, mineral and otherwise, on the face of the globe.

The opening up of Asiatic Russia, through the gold rush and dozens of similar devices for forcing colonization and exploitation, has been personally supervised and closely watched by Joseph Stalin, if we can accept the testimony of Soviet newspapers and magazines. Stalin is a member of the Georgian race, one of the oldest races of the Near East. He has emphasized with pride on more than one occasion that he considers himself an Asiatic. And I am convinced, from what I saw myself, that he is probably more interested in Asia than in Europe.

It has become obvious by this time that Stalin is an

empire-builder of the first rank. He has never taken offense when Soviet writers compare him to Peter the Great, the greatest of empire-building Tsars.

A few years ago, Stalin's empire-building tendencies aroused a great deal of nervousness in the border countries on Russia's west, especially among the little European countries which once were a part of Russia but managed to break away during the Revolution. Recently, however, these little countries have lost their nervousness and have become comparatively friendly with Russia, although their governments are prejudiced against communism. They no longer show any fear of Russian expansion.

Why is this? Some foreign observers reply: "Because Soviet Russia wants peace, and these countries know it." These observers are indignant when it is suggested that Stalin is an empire-builder. It seems to me that Stalin is still an empire-builder, but that the empire he has in mind is an Asiatic empire. He shows no interest in expanding to the west, but he and his associates have shown a decided tendency to expand in the east. Stalin has openly announced his determination not only to hang on to the vast undeveloped empire which Russia already possesses in Asia, but also to retain predominant Russian influence in the great adjoining border countries of Central and Eastern Asia, such as Outer Mongolia and Sinkiang.

Before I went to Russia in 1928, I had rarely heard of most of these great Central Asian regions, and I suppose the average American hasn't heard of them yet. But they are immense territories, several times the size of most European countries, and they may be richer in natural resources than anyone has yet suspected.

Take, for example, the great province of Sinkiang. This

province is nominally a part of China, but actually has been ruled by independent warlords for generations. It is chiefly dependent upon Russia for trade, because it is not connected with the rest of China by automobile roads or by railroads, whereas a number of good roads lead into Russia.

This province covers 550,000 square miles, almost three times the size of Germany. It has been so remote from any coast, so cut off from the rest of the world by high mountains and lack of railroads and highways, that it has never been properly developed. And yet I have good reason to believe that Sinkiang may be immensely rich in undeveloped natural resources.

As part of my work for the Soviet Government, I explored a considerable section of the Altai Mountain chain which runs through southern Kazakstan and across the Soviet border into Sinkiang. I discovered that these mountains are very rich in several minerals besides gold, and the Soviets already have begun to exploit several areas. But my studies convinced me that the richest deposits of minerals in the Altais very probably lie on the Chinese side of the border, in Sinkiang. The Russians have kept a number of "advisers," military and otherwise, in Sinkiang for several years, and it is safe to assume that Soviet geologists have thoroughly explored the Altai Mountains on the Chinese side of the border and actually know what I can only estimate.

To the northeast of Sinkiang, along the Soviet Asiatic borders, lies the great so-called "People's Republic" of Outer Mongolia. This is a real unknown land—except to the Russians and the Mongols who inhabit it. No other persons have even been allowed to visit Outer Mongolia

in recent years. I myself have never crossed the Soviet-Mongolian border, although I have traveled along it for considerable distances, and have talked to Outer Mongolians.

Moscow's relations with Outer Mongolia are much more clear-cut than with Sinkiang. The Outer Mongolian Republic has been under the protection of Moscow since 1924, when an insurrection headed by pro-Russian Mongols threw out the Chinese-dominated government of the period. Stalin announced in 1935 that the Soviet army would fight to protect Outer Mongolia if it were attacked. Of course it could be attacked only by the Japanese. Outer Mongolia is an even larger territory than Sinkiang. It covers more than a million square miles, about one-third the entire territory of the United States, but with less than a million inhabitants. Its population has been nomadic, the descendants of the Mongols who conquered most of Asia and Europe a few centuries ago. They have lived on their herds, like the Russian Asiatic nomads I have described. But in recent years, with Russian assistance, they have been gradually developing industry and mining in their country, and Outer Mongolia, too, may turn out to be much richer than was expected.

I have pieced together my own experiences in Asiatic Russia with what I have read and been told by Russians with wider experience than my own, in order to follow as intelligently as I can what is going on today in the deep interior of China and Central Asia. It seems to me that the course of events there, beyond the observation of most newspaper correspondents or writers of any kind, is perhaps as important as the battles between Japanese and Chi-

nese in eastern China, or many European events which get more attention in newspapers.

As I see it, these Central Asian areas, the interior provinces of China and China's former outlying dependencies such as Sinkiang and Outer Mongolia, may become the battleground between two great nations with empire-building tendencies, Japan and Russia. Another great empire, Great Britain, has taken a hand in this struggle in order to protect its vast possessions in Asia; while the French Government also is interested on account of Indo-China.

Joseph Stalin, it would appear, has turned even more sharply toward Asia since the great Communist conspiracy against him was discovered in 1936. His ruthless suppression of that conspiracy and its leaders, who included many of the most important Communist revolutionaries, has weakened Stalin's influence with socialist and labor groups in Europe, and probably has also weakened his own interest in European affairs. It certainly crippled his European army, by destroying its general staff.

So Stalin has turned his back on Europe, so to speak, and swung the Soviet peoples with him, facing toward Asia. I have been told by people in Russia, who ought to know what they were talking about, that the Soviet police have been deliberately clearing out almost all the border regions between Europe and Soviet Russia, moving whole towns and villages from these regions out into Siberia or some other pioneer section where they begin life over again. The Russians are thus creating a vast no man's land along the European borders, which can be heavily fortified, strung with electrified wires and barbed wires and made as nearly impassable as modern science will permit.

The Government thus seeks to insure itself against an invasion from the west. But at the same time it also reassures European nations, especially the little border nations, who had more reason to fear Russia than Russia had to fear them. Noting that the borders are being sealed tight, the neighboring governments are pleased, being desirous only of being left alone so far as Russia is concerned.

But out in Asia the Russians are establishing no such quarantine along the borders. It is true that the borders are closely guarded in Asia, as they are in Europe. Some of our gold mines were located in the border zone, as the Soviet authorities call it, and workers had to obtain special passes from the police to live and work there, and had to renew their permits frequently. Before issuing such passes, the police investigated the previous records of workers, to make sure that they were not members of dispossessed groups who might be expected to be hostile to the Soviet Government.

But the Russians are busy as bird dogs in countries beyond the Asiatic borders, not passive as they are in Europe. Fleets of automobile trucks pass along the highways into Sinkiang and Outer Mongolia. The latter region is treated practically as a part of Russia, except that it gets more favorable treatment than most Soviet regions.

In that connection, a Russian acquaintance who worked in a Moscow knit-goods factory remarked rather bitterly one day that the entire output of his factory was being sent to Outer Mongolia. "They say we have to keep the Outer Mongolians satisfied, because otherwise they might get the idea of buying their goods somewhere else," he explained. "So they send those Mongols the best stuff our

factories are making, while we have to get along with whatever is left over after they are satisfied."

Stalin and his associates have worked out a very neat device for adapting the Communist Party to the uses of Asiatic imperialism. The secretaries of the Party in the various Asiatic regions, both inside and beyond the Soviet borders, become the king-pins of their districts because they have the full force of Moscow behind them. Sometimes it is pretty hard to tell the difference between the position of Communist secretaries in Asiatic districts and that of the governors under pre-war Russia, if what I read about the latter is correct.

I was traveling two or three years ago from Moscow to eastern Siberia on the trans-Siberian express. A brisk young Mongol came into my compartment to ask if I had a deck of playing cards. I happened to have one, and he asked to borrow it. He explained that the wife of the chief secretary of the Communist Party in Outer Mongolia was on board, and wanted to play solitaire. She was returning from a visit to Moscow.

He kept coming in every day to borrow the cards, as they were the only deck on the train, and we had several conversations. He told me with a grin that his employer was the "Stalin of Outer Mongolia," and was gradually becoming as powerful in his district as Stalin was in Russia. The Mongolian Communists had blundered at first, he explained, by trying to introduce too many reforms, and would have been thrown out of the country if it hadn't been for Russia. But they had profited by their mistakes, and were going easier now. So the people were better satisfied with them. He explained, for example, that it was no use trying to throw out the Buddhist priests in Outer

Mongolia so long as there were more priests than there were Communists.

On the express trains from Asiatic Russia, one encounters a steady procession of Asiatics, Party secretaries, and officials going to Moscow. They travel in state, and their wives and relatives do the same. At Moscow they are lavishly entertained and taken into the Kremlin to meet the Government leaders. Even an American is impressed by a visit to the Kremlin, and one can imagine what these simple Asiatics think of it. They go back home to tell their people how rich and powerful Moscow is, and are no more interested in breaking away from Moscow than Indian princes are in breaking with British rule in India.

If these Party officials don't play ball with Moscow, they soon find themselves out in the cold. The Moscow conspiracy trial in March, 1938, showed what happens to Asiatic Communist leaders who begin to think about independence. In this case, men who had been despotic rulers of large sections of Asiatic Russia for many years were lined up against a wall and shot. That has been the regular practice. And when the head man goes out—the chief Party secretary—the whole political machine he has built up goes out with him. Hundreds, sometimes thousands, of officials lose their jobs, if they don't get shot or stuck in jail or sent into exile.

Beyond the Soviet borders in Outer Mongolia the Russians maintain their influence by the same instrument as in their own Asiatic regions, the Communist Party. But in Sinkiang, so far as I know, there is no strong Communist Party. Instead, the Russians have sent advisers to the military governor of Sinkiang, a Chinese warlord-politician who understands which side his bread is buttered on. He

has played with the Russians for many years. They have helped him put down more than one insurrection. I don't know whether or not he is a reformer, like the Soviet Communists, but at any rate he is shrewd enough to have the Russians on his side.

Stalin and his associates, as empire-builders, have apparently anticipated for years that the Japanese would sooner or later strike out to build an empire for themselves on the Asiatic mainland. I have seen, during my own ten years in Russia, what the Communist General Staff has done to hold Japan in check so far as Russian interests are concerned. First of all, the Russians have built a line of defense along the Manchurian border as strong as that which they are now building along European borders. They have built up a powerful, specialized army in the Far East, almost completely independent of the army in Europe. In this way, they succeeded in preventing a Japanese attack upon their own Far Eastern territories, which are rich in natural resources of every kind.

I have heard it suggested that the Soviet population in the Far East is so discontented that it would welcome Japanese invasion. This is not true. I have talked with hundreds of Soviet citizens along the Amur and Shilka Rivers and all through the mining regions beyond Lake Baikal. Many of these people are not especially fond of Soviet rule, but they prefer it to the Japanese. They can remember when the Japanese occupied eastern Siberia; the Japanese were not induced to leave until 1922. The Japanese military acted so brutally during their occupation that they made enemies of the Soviet population for generations.

One middle-aged prospector working on the Shilka

River told me about his experiences with the Japanese. He said that a Japanese garrison was kept just outside the town where he was living during the occupation. Members of this garrison, during their rest period, would take their guns and go up on the hillside overlooking the town. There they would sit taking pot-shots at people moving along the streets, and were highly amused when they made a hit. Incidents like this have made the people in eastern Siberia ready to back the Russians in a fight with the Japanese, even though they are not Communists.

Russian foresight, combined with international developments, turned Japanese attention away from Soviet territory into China. The Japanese decided they could grab China easier than they could the Soviet Far East. The Russians had their stone wall defense along the Manchurian border and apparently along the borders of Outer Mongolia as well, combined with a large air fleet. So far as defense of their own territory was concerned, they needed only to stand pat. But as empire-builders they have not been satisfied to do so. They have taken a hand in the struggle between Japan and China.

The Japanese naturally have been planning their campaign in China for years. Their plan is to break up the Chinese Government by seizing its capital, all its ports, all its railroads and important rivers, which a modern military power can do without much difficulty, since the Chinese regular army can offer only temporary resistance.

So the Chinese Government has been pushed farther and farther back into the interior, into the provinces where the same Government had previously pushed the Chinese Communists. These interior provinces and regions, whose very names are unknown to most people, even to most

Chinese, are thus becoming the scene of a struggle for survival by what is left of the Chinese Government. For their own purposes, the Russians and the British are equally concerned to keep the Chinese Government going, as a future threat to Japan's dominant position in China.

So what is likely to happen in these remote interior regions of Central Asia, under nominal Chinese control? It seems probable that the same thing will occur here as has been happening in the Asiatic regions of Russia. The Chinese Government, cut off from its coasts and rivers and railroads, will begin to open up these interior regions, to build railroads and automobile roads. In fact, it is reported they have already begun to do so, with the help of the Russians in the north and of the British in the south.

Authentic reports have appeared in reputable newspapers stating that the province of Sinkiang is being combined with adjoining Chinese provinces into a north-western Chinese Government dominated and assisted by the Russians. This Government, it appears, will soon be under the influence of Chinese Communists, just as the Government of Outer Mongolia has been under the influence of Mongolian Communists. And these Communists, if they know what is good for them, will pay primary attention to the instructions of the Communist General Staff in Moscow.

So the Russians, just as they did before the Revolution, will continue to push out into Asia. They have a different set of rulers now, and a different set of ideas, but they share with the former Russian Government the urge to create for themselves an empire in Asia.

Stalin, the Asiatic, seems to be turning his back on Europe, so far as possible. Europe is already full of people,

is already civilized and developed and proud and filled with rivalries and hatreds. But the Russian part of Asia, together with the vast adjoining interior provinces and dependencies of prostrate China, is almost empty and is richer in natural resources than anyone suspected a few years ago.

Here is the raw material for a great new empire, and the Russians have been busy laying its foundations during the years I have worked in Asiatic Russia. They pulled out of northern Manchuria, under Japanese pressure, because they were too poorly prepared to fight. But when the Japanese exerted pressure on Outer Mongolia, a year later, the Russians felt strong enough to defy the Japanese, and the latter drew back.

Now the Japanese have staked their whole future on the invasion of China proper. To the Russians, this means that their own empire is safe. But they are taking no chances. They are making sure that Japan is stuck fast in China by reinforcing the Chinese Government, pushed back into the interior provinces where only Russia can give them real help. The assistance of Russia, the empire-builder, is accepted by Chinese of all classes, who had previously scorned the help of Russia, the Communist power. Russia thus makes sure that she will have all the time she needs to exploit and develop her vast, potentially prosperous Asiatic lands, almost uninhabited and not even prospected a few years ago.

XXV. COMMUNIST CIVIL WAR

DURING my last year in Russia, I came into Moscow on two or three occasions for brief visits. We were invited to various social gatherings of the American community, and I discovered that Moscow Americans were engaged in a non-stop discussion of the Russian conspiracy trials which had started in August, 1936, and had been followed by hundreds of thousands of arrests in all parts of Russia.

These discussions were always very refreshing to me, coming as I did from Asiatic Russia, where I had associated entirely with Soviet citizens for weeks or months. These Americans, both diplomats and correspondents, had the most diverse opinions. They argued fiercely, getting very heated about it, and tried to shout each other down. They had a lot of fun.

The contrast between these American gatherings and Russian social groups at this time was tremendous. The nation-wide hunt for conspirators naturally was of far greater personal concern to the Russians than to the Americans, but the Russians were having no discussions. In private, as in public, they all repeated the official explanations published in the Soviet newspapers, and there was no clash of opinions. The Russians never know when some acquaintance will turn out to be a police agent, so they no longer discuss such matters if any other Soviet citizen is present. They will sometimes speak their minds when alone with foreigners.

The Moscow Americans were about evenly divided on the question whether or not the conspiracy trials were pure fakes. I listened to their debates on the subject. Some of them argued that there had been no conspiracy whatever, that the defendants in these trials had never done anything worse than criticize Stalin and his actions, and that they had been compelled by torture to confess crimes they had never committed.

But most of the Americans who had attended the trials were not so sure that the testimony was false. Especially after the second trial was held, in January, 1937, some of them who had argued the whole thing was a frame-up switched over to the other side and decided there had been a big conspiracy, although they were pretty sure that some of the testimony in these trials was inaccurate.

Some of these Americans were good debaters. In the last two or three years, the spy scare in Russia has isolated foreign diplomats and correspondents from the Soviet community, so there isn't much for them to do in their leisure time except to sit around and talk. The atmosphere of Moscow seems to stimulate heated discussions, so Americans who have lived there very long get a lot of practice in arguing.

The case was therefore pretty well presented by both sides. If I had not acquired some ideas of my own, I might have been hard put to it to decide one way or the other. Here was a group of Americans living right in the Russian capital; most of them had lived there for years. They were all honest persons, entirely free to express the truth as they saw it. Many of them had known the defendants in these trials, and most of them had attended the trials. They ought to have the low-down.

But they held contradictory opinions, as I have said. And they were very decided in the opinions they did hold. Those who denounced the whole affair as a frame-up were just as sincere and emphatic as those who believed a conspiracy had existed. I said to myself: "If this group here can't agree on what has happened, how can outsiders who have never even been in Russia expect to get at the truth?"

My own views on this subject are based largely upon my personal experiences. I have told how I encountered large-scale sabotage in the copper-lead mines and mills in the Urals and Kazakhstan, and how the atmosphere I encountered in the Copper-Lead Trust from the moment I first worked for this Trust in 1931 made me uncomfortable and suspicious. I was so unhappy in my work for this Trust that I tried to resign and leave Russia in 1932, and agreed to stay only when Serebrovsky promised me that I wouldn't have to work in the Urals.

After I had left Russia, a third great conspiracy trial was held in March, 1938. The testimony in this trial did much to confirm my previous impressions that a tremendous anti-Stalin conspiracy had been organized in Russia in 1931 or earlier, and that it had included some of the most important men and women in the country—Communist managers who had been given the most responsible positions in industry as well as in politics, and who could easily cause catastrophic damage to any large industry if they were so minded.

There has never before been anything quite like the political system in Russia. The politicians—the Communists—got control of everything in this vast country as no group of politicians has ever done before. Their Government either owns outright or closely controls every enterprise

of any sort in Russia—land, buildings, farms, factories, stores, mines, forests, steamers, banks, railroads, telephones and telegraphs, radio stations, newspapers, publishing houses, everything. Nothing whatever has any independence of the Government.

To keep things in their own hands, the Communist General Staff appoint members of their own Party to all key positions. Technical experts were always subject to orders from Communists. Having attained an iron hold on everything in the country, the Communists have arranged to keep it forever by forbidding the organization of any other political party, or even the expression of any other political views. A large police force has been built up to suppress actual or potential political opponents.

This is about the slickest device ever conceived to keep one group permanently in power. However, there proved to be one catch: the Communist leaders could not agree among themselves. These hard-boiled revolutionaries had risked their lives more than once in pre-Revolutionary Russia for the sake of their ideas. The same men now held key positions in the Communist Government. But they couldn't think exactly alike, and when they had disagreements, these strong-willed men couldn't surrender their own ideas simply because they had been voted down by a majority of the Party.

The disputes inside the Party became so serious that they threatened to break up the whole system. Unless the system was to be modified, something must be done to restore discipline inside the Communist Party. So Joseph Stalin, an Asiatic with Asiatic conceptions of enforcing discipline, and at the same time one of the shrewdest political manipulators imaginable, got hold of the Party machine and began

to enforce discipline by suppressing, exiling, imprisoning leaders of opposition Communist groups.

From 1927, or thereabouts, a new policy was instituted. Before that time, political opposition had been forbidden outside of the Communist Party. From this time onward political opposition was also forbidden inside the Party. The Party took a vote on any dispute; and if 51 per cent of the members voted for one side, the other 49 per cent could no longer argue for their opinions or express any critical views.

Some of the strong-minded revolutionaries inside the Party could not adapt themselves to any such system. They were especially disgruntled because Stalin proved to be a much more clever political manipulator than they were, and could always get a Party majority for any project he favored.

From 1929 onward, Stalin began to introduce a whole flock of new policies and projects. This was the period of the Five Year Plans, of the Second Communist Revolution, of all sorts of changes and shifts in the Soviet system and in Communist theory and practice. Through the political machinery he had worked out and established, Stalin directed all these changes entirely to suit his own ideas, and the other old revolutionaries, unless they agreed with Stalin, were left out in the cold.

With human nature being what it is, this situation naturally created many powerful enemies for Stalin, especially among the veteran revolutionaries who had been willing to die for their ideas in the past, and still were. They tried to start underground political agitation as they had done under the Tsars. But the political system which they had helped to create was something much more powerful and subtle

than the system they had helped to overthrow. Stalin and the directors of his political police knew all the tricks of underground agitation.

If I have figured it out correctly, the great conspiracy which has almost wrecked the Soviet system in recent years, and hasn't yet been cleared up, is the natural consequence of the unnatural political scheme which forbids strong men to express their opinions openly and freely. Such a system is bound to produce underground conspirators.

Stalin and his associates apparently didn't foresee this. After defeating political rivals inside the Communist Party in the period 1927-30, they exiled them for a few months or years, and then brought them back and gave them responsible positions in politics and industry. They seemed to think these veteran revolutionaries would now buckle down and faithfully follow the course laid out for them by Stalin and the lesser men he had promoted to the highest positions because they had always agreed with him.

My own experience in the Copper and Lead Trust provides a good example of Stalin's treatment of defeated rivals among the veteran revolutionaries, and of the consequences. When I started to work for this Trust in 1931, the man chiefly responsible for its work and that of other allied industrial enterprises, was Yuri Piatakoff, a veteran revolutionary who had disputed with Stalin about several Communists projects, and had been sent into exile for a time, and then brought back, had publicly apologized for his past actions, been "forgiven," and assigned to this responsible position.

There were dozens of men all through Soviet industry, in key positions, who had gone through a similar experi-

ence. Yet they were expected to entertain no hard feelings, to agree with Stalin about everything in future, and to work with all their energy and enthusiasm to increase his prestige at home and abroad. Among their other duties, they were expected to get up almost every day and make speeches praising Stalin to the skies.

Well, to my mind it is incredible how any man as smart as Stalin could think subordinates of this sort would work loyally in support of himself and his ideas, especially when he knew from past experience how stubbornly they had stuck to their own ideas, and what sacrifices they were willing to make for them. But these former enemies were certainly given a lot of responsibility, and were in a position to cause tremendous damage to Soviet industry if they were so minded.

The testimony in the 1938 trial has done much to explain why Stalin was thrown off his guard. He placed a great deal of reliance, as any man in his position would have to do, upon the chief of the political police. This man, Yagoda, stood high in Stalin's favor, and was the most feared and hated man in the country. He had the power to arrest and imprison any Soviet citizen indefinitely without trial, or to send him to a concentration camp or into exile without even announcing that he had been arrested.

Yet this man, who was arrested in 1937, testified at his trial in 1938 that he had been conspiring against Stalin for years, and that he and his associates were slowly preparing a coup d'état which would replace Stalin with a group of those same former rivals whom Stalin had brought back and given responsible positions, even though they had much less prestige and power than before they broke with Stalin.

If this man's story is true, and I don't see why it couldn't be true, the chief of the police force, which is the central instrument of power for a dictator like Stalin, was on the side of Stalin's enemies, and was only awaiting a favorable opportunity to seize the Government. And so many important Communists were on the other side that it was easy to cover up industrial sabotage or anything else.

I never followed the subtleties of political ideas and maneuvers in Russia, except when I couldn't get away from them; but I had to study what went on in Soviet industry in order to get through my work satisfactorily. And I am firmly convinced that Stalin and his associates were a long time getting around to the discovery that disgruntled Communist revolutionaries were the most dangerous enemies they had. It naturally wasn't my business to warn my Communist employers against their fellow Party members, but some Russians can bear witness that I mentioned my suspicions to them as early as 1932, after I had worked for some months in the Ural copper mines.

During the past two or three years, the Soviet Government has shot more people for industrial sabotage than any other government has ever done, so far as I can discover. A large proportion of those shot were Communists who had previously disagreed with Stalin and then been brought back and given less important but responsible jobs in industry. Some Americans seem to find it hard to believe that Communists would try to wreck industries in a country where other Communists are in control. But anyone who knows Communists can understand that they will fight each other more fiercely than they fight so-called capitalists, when they disagree over some of their hair-splitting ideas.

Sabotage is a familiar Communist weapon in every country. Industrial sabotage in the United States usually can be traced to Communists or people who think like Communists. It is hardly surprising that some Communists should use this same weapon in Russia, once they have decided that the existing régime does not satisfy their own peculiar notions.

It hardly seems necessary to study Dostoevsky's novels or to dig deep into Russian history to find a complicated explanation for what has happened in Soviet Russia since 1936, as some more subtle minds than mine have preferred to do. My experience confirms the official explanation which, when it is stripped of a lot of high-flown and outlandish verbiage, comes down to the simple assertion that "outs" among the Communists conspired to overthrow the "ins," and resorted to underground conspiracy and industrial sabotage because the Soviet system has stifled all legitimate means for waging a political struggle.

This Communist feud developed into such a big affair that many non-Communists were dragged into it, and had to pick one side or the other. Those who could avoid making a decision stood to one side; they didn't want to get caught, whichever way the battle went. Disgruntled little persons of all kinds were in a mood to support any kind of underground opposition movement, simply because they were discontented with things as they stood. I saw what this conspiracy did to some of the mines, and I can well believe that it was equally destructive to other branches of Soviet industry, as the official reports say it was.

Well, now that the conspiracy has been discovered and thousands of actual or suspected men and women have

been put out of the way, will Soviet industry show marked improvement in the near future? To that question, I would answer: improvement is likely to be slow. The fierce hunt for conspirators has continued now since 1936, and has upset morale in every kind of organization, industrial or otherwise. The political police, throwing out their nets, have hauled in some honest men and women along with the conspirators, and have discouraged any kind of initiative, at least for the time being.

Looking at the Soviet industrial system from the viewpoint of an engineer, as I have always done, it seems to me that the Communists have got themselves and the Russian people into a kind of vicious circle. Their system requires that the key positions in industry be occupied by Communist politicians, who can only belong to the single political party which is allowed to operate.

But Communists, since opposition was ruled out inside the Party as well as outside, have become yes-men, agreeing with Stalin and his associates about everything. The younger members see what happens to those who failed to agree, and govern their course accordingly.

Modern industry requires a great deal of initiative and originality to progress properly. The Soviet system, with submissive politicians in key positions and browbeaten technicians taking orders from them, does not encourage the prime requisites for advancement. So long as the Soviet system remains in its present form, it seems likely to produce one conspiracy after another, and to discourage the initiative and enthusiasm which are necessary to progress.

XXVI. GOOD-BY TO RUSSIA

I CAME back to Moscow in July, 1937, after helping to straighten out the great half-wrecked lead-zinc mines of southern Kazakstan. The country was turned upside down at the time by the Communist conspiracy; men I had known for years were disappearing right and left into prison or exile. Nobody seemed to know which Communist leaders were for or against Stalin.

The Russians had become hysterical, for which they couldn't be blamed. The political police were striking in every direction, coming late at night to almost every residential building in Moscow, dragging off suspects to prison. The same conditions existed in provincial towns and even on the collective farms. Every day the newspapers reported new sensational arrests.

One consequence of the arrests and the hysteria was a great wave of foreign spy mania. The newspapers were publishing daily accounts of the work of foreign spies in Russia, who were accused of plotting with opposition Communists against Stalin and his associates. There was so much talk about spying by foreigners that Russians were afraid to have anything to do with any foreigners. Our own acquaintances, whom we had known for years, were afraid to visit us.

During my long period of work in Russia, there were several waves of similar spy mania, but none anywhere near so extreme as this one. Every foreigner, even those

who had been Communist sympathizers for years, became an object for suspicion. Hundreds of foreign residents in Moscow and elsewhere, who had come to Russia because they were attracted by the system, were ordered to leave on a couple of days' notice. Foreigners who had married Russian wives were not allowed to take them along.

The small foreign community which was permitted to stay on in Moscow, consisting mostly of diplomats and newspaper correspondents, was quarantined, not necessarily by the police but by the fear of the people. Several correspondents told me that their Russian language teachers had been arrested. In one case, a Russian woman who had visited an American correspondent for years in order to read foreign magazines (which are mostly forbidden in Russia) was sent to a concentration camp. Americans became as much isolated as Germans or Japanese, since it wasn't a matter of race feeling.

In such an atmosphere, it was obviously hopeless for a foreign engineer to work properly. It was bound to be only a matter of time until some half-baked individual would jump up somewhere in a Communist meeting and accuse me of spying, as had been the case with other foreign engineers I knew.

I must admit that I didn't like to leave Russia under such circumstances. And the Russians need foreign engineers today more than they ever needed them before, in my opinion, because they have destroyed through fear the sense of initiative which had gradually been developed in their own workers during my years in Russia. The normal progress of Soviet industry will be delayed indefinitely, unless I am badly mistaken, because foreign advisers and technicians have been pushed out too soon. One example

in my experience will serve to show what I mean. At the Kalata copper mines, in the northern Ural Mountains, I have told how a group of American engineers and metallurgists succeeded in a few months in raising the production of blast furnaces from forty-five tons per square meter per day to seventy-eight tons. After the Americans were sent home, deliberate sabotage almost wrecked these mines and smelters permanently, but the responsible persons were caught and convicted.

There was then no reason why the old rate of production could not have been attained again, and continued indefinitely. But the Soviet engineers in charge of these smelters never came within striking distance of our record of seventy-eight tons. In fact, Soviet industrial journals cheered when the Kalata smelters reached a production level of fifty tons in 1936.

Why was this true? I should say that the Americans, knowing that they were not going to be shot or even arrested if their plans were carried through, were willing to take the moderate risks necessary to push up production in these smelters; whereas Soviet engineers, realizing that failure of their schemes would probably result in charges of wrecking, and might even cost their lives, naturally took no chances whatever, and did not dare to put the slightest strain on equipment. I believe this situation at Kalata is typical of Soviet industry, and will continue to be so until the authorities get over their delusion that they can increase industrial production by keeping managers in a constant state of fear.

It is easy to point out the mistakes of others, especially after plans have been tried out and failed. Looking back over my long experiences with Soviet mining, I can cite

numerous defects in their system. But I have said before that I consider men more important than systems. And one of the chief faults in Soviet Russia, as I see it, is that political manipulators and reformers, with little or no experience or feel for industrial management, were given the most responsible positions in creating Soviet industry from 1929 onwards.

The task in any case was stupendous. I doubt if the most capable industrial engineers and managers could have gotten through this period without serious mistakes and lapses. The Communist General Staff tried to do thousands of things at one and the same time, before they had prepared one-tenth of the necessary personnel of managers and skilled workmen. Under the circumstances, it is a marvel that they came through at all. They might not have done so if the Soviet peoples were not so long suffering and willing to put up with any amount of discomfort and even with food shortages over long periods.

Having come as far as they have, the Soviet peoples ought to find the future comparatively plain sailing. The level of industrial education is much higher than it was ten years ago, and fairly strong foundations have been laid for almost all large industries. Russia has the possibility of becoming more nearly self-sufficient than any other country, with the exception of the United States. It has the natural resources.

Younger men, with real training as engineers or industrial experts, have been gradually replacing the revolutionaries who held down key positions in industry for years, and who committed many stupid blunders when they did not actually indulge in deliberate sabotage. These younger men and women ought to do better than their predecessors,

if the Soviet authorities can shake off their reliance upon police spies and give their industrial executives some independence. I haven't made up my mind whether or not their system can get along at all without its police spies.

When it came time for me to leave Russia, it proved to be a wrench to come away with the knowledge that I was not returning. Certainly it was not the system of Bolshevism which held me; it must be obvious by this time, even to fanatics, that Bolshevism is shot through from top to bottom with serious defects. It wasn't even the people, although I had made many friends among them. What held me in Russia was the great open spaces of the Russian East—Siberia and Kazakhstan and the country beyond Lake Baikal. The Russians have something there which is more important than any political system.

The Russians, so far as I am aware, are the only people left in the world who possess a tremendous undeveloped country, almost a continent in itself. In Siberia and the regions around it they have vast stretches of territory, equally rich from the viewpoint of agricultural or industrial possibilities, with untold wealth in mineral resources, forests, fur-bearing animals, fisheries, great rivers for irrigation and water-power. And these regions are still almost as empty as the American West was a few generations back, and hold the same possibilities for the future of the younger generation in Russia.

The present rulers of Russia have fenced in this great preserve for their own people. They don't propose to open it up to the land-hungry and unemployed poor people of Europe, as the United States Government did in the nineteenth century with their virgin western lands. The Soviet Government has put up the bars so high that very few

immigrants from Europe or Asia could get over them if they wanted to. Moscow has built up a huge army and an equally large border police force to guard their own empty lands for their own future generations.

The fertile lands and mineral-bearing mountains of the Russian East promise more for the future of the Russian people than any of their novel political, social and economic ideas. These ideas come and go; many of them were discarded during my period of work in the country. The system of Bolshevism is not the same, in many respects, as it was in 1928 when I first arrived in Russia. There is no reason to believe that it will be the same ten years from now as it is today.

But the Moscow rulers have succeeded in keeping intact their wide open spaces in Asiatic Russia. They have gotten back every square mile of territory out there which was first staked for them by the Tsars. They pushed the Japanese out of eastern Siberia in 1922, and recovered sovereignty in all the little Asiatic independent states set up after the Revolution. The Bolsheviks have suppressed any and all insurrections in these Asiatic sections as sharply and brutally as the Tsars did before them.

In my humble opinion, the Asiatic portion of Russia is where the future of that country lies. The people and their rulers are conscious of this fact, and are facing to the east, turning their back on Europe just as we Americans did in the previous century. And it was because my work in Russia took me into these Asiatic regions and gave me the opportunity to help open them up, that I threw myself so whole-heartedly into my work and tried to give the Russians more than value received.

I returned through the Russian-Polish border on a warm

August morning in 1937, after the tiresome twelve-hour train ride from Moscow across the monotonous plains of European Russia. It is the custom in Russia for all persons who have been given Soviet decorations to wear them, and I carried on my coat-lapel the Order of the Red Banner of Labor which had been awarded to me in 1935. I had intended to take off the medal before I crossed over into Poland, but one of my fellow-passengers, an American, was having some difficulties with the Soviet customs, and I got so interested in interpreting for him that I forgot my tell-tale label.

As we crossed the border, the Polish immigration officials passed through the train. One of them glared at me, and I was reminded that a Polish passport official had been none too friendly to me and my family when we first passed this way on our way into Russia almost ten years before.

The official kept on glaring, and I suddenly realized I was still wearing my Soviet decoration. The Pole hissed into my ear: "Take that thing off!"

I automatically obeyed him, and as I did so, thought to myself: "Well, that's the end of my Russian adventure." It had been a time of severe hardships and difficulties which had sometimes seemed insurmountable. But we had come through them all, and now here I was, heading back for my own country.

As my train slid through the flat Polish countryside, I said to myself: "Next month I ought to get in some good duck-hunting in southeastern Alaska."

XXVII. POSTSCRIPT

AFTER I had laid out the material for this book, and was back at work again in Alaska, I received word from American friends in Moscow that A. P. Serebrovsky, founder of the Soviet Gold Trust and my respected chief during the whole of my period of work in Russia, had been arrested.

Serebrovsky simply disappeared, as hundreds of other prominent men and women have done in Russia during the past three years. Some weeks later he was denounced in an official newspaper as an "enemy of the people"—a vague expression which is used regularly to designate those who fall foul of the political police.

The news naturally came to me as a shock. This man had won my sincere admiration for his numerous superior qualities. Without his constant encouragement of my efforts to help develop Soviet gold mining, I would never have stayed in Russia as long as I did.

My readers may ask: "Why on earth should a man like Serebrovsky be arrested?" But I know that he is not the only superior man who has disappeared during the numerous purges in Russia since 1936. A British correspondent in Moscow recently compiled a list from official sources showing that more than five hundred directors of trusts, factories, and big industrial undertakings have suffered Serebrovsky's fate during 1937-38. American friends in Moscow have informed me that the man who succeeded

Serebrovsky as head of the Gold Trust was himself arrested after a few weeks in office.

Personally, I am completely convinced that Serebrovsky was *not* guilty of any kind of industrial sabotage. I worked too closely with him for more than nine years to be in any doubt about that. This man put all his heart and soul into building up the Gold Trust, and must be given a lion's share of the credit for making it probably the most efficient industrial organization which has been created under the Soviet régime.

I have made it clear in this book that I believe some Communist industrial managers were guilty of sabotage, judging solely by my own first-hand observations of what happened in enterprises under their control. But I am even more positive that Serebrovsky would scorn any such measures. He is an engineer, with the engineer's hatred for those who destroy machinery or natural resources.

That being the case, what are we to believe? Does Serebrovsky's arrest prove that all, or most, of the arrests in Russia are entirely unjustified, and that Joseph Stalin is rapidly shooting or otherwise disposing of all his best men, being afraid of possible rivals?

I doubt if that is the answer. While I am sure that Serebrovsky never indulged in industrial sabotage, I know nothing about his political activities. He was a veteran revolutionary, who had risked his life for his ideas on more than one occasion before the Revolution, and I suppose he might be willing to do the same again if he disagreed with policies being put in force.

It should be obvious to any student of Russian affairs by this time that the political system they have worked out over there tends to *manufacture* conspirators. A strong, sincere man, with positive ideas about what is right and

what is wrong, is the chief sufferer under a system which forbids him to express his opinions, or fight for them, after a majority of the ruling political party has voted against one or another of his convictions.

I do not know that Serebrovsky even entertained critical ideas about the Stalin régime; he certainly never expressed any such criticism to me. But he was no "yes-man." If he didn't like something which was being done, I don't doubt that he would express himself, openly and honestly and even at great personal risk. And the current Soviet system doesn't seem to be healthy for men of that type.

From my point of view, as an engineer, the most shocking feature of the disappearance of Serebrovsky, and of others similar to him, is that neither Russia nor any other country can afford to throw aside such men. If there is one fact upon which most of us can agree, it is that there is no surplus of brains. That is just as true in Soviet Russia as anywhere else. The world is full of "yes-men" and mediocrities, but it has never yet had enough men of Serebrovsky's caliber.

I knew this man intimately from 1927 to 1937. During all of this time I know that he accomplished the work of a dozen ordinary managers. His terrific energy was especially outstanding and especially useful in Russia, where the average engineer or manager has little energy to spare. He combined energy and devotion to his job with a quality which is even more rare—leadership of men.

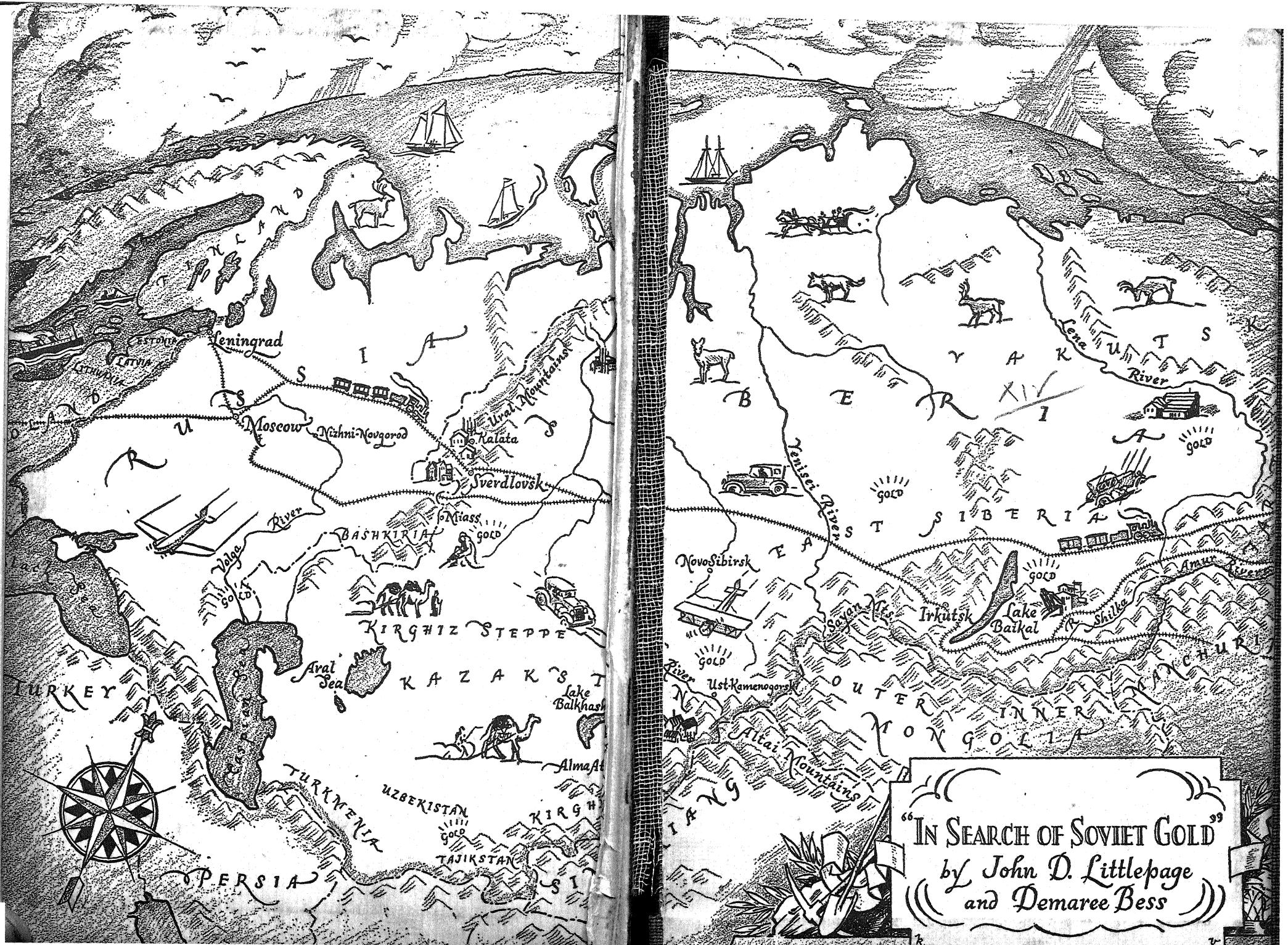
I once accompanied Serebrovsky on a flying visit to a group of mines where living and working conditions had become very unsatisfactory, and where managers and workmen alike were extremely discouraged. He asked the mine manager to call all the workmen together, and after they had assembled he made a speech to them. That speech

was one of the greatest orations I have ever heard. He was speaking extemporaneously, without any notes whatever, and yet the speech couldn't have been more effective if he had worked on it for months. Before he had finished, he had inspired those men to such a degree that they went down into the mines and pushed production far above any previous achievements.

I haven't been able to discover exactly what has happened to Serebrovsky. Under present Soviet conditions, the federal police can dispose of a man without telling even his family whether he has been shot or sent into exile or put into a concentration camp or prison. Accused persons, under these conditions, can be kept in jail for years without even having any definite charge put against them. There is no law of *habeas corpus* in Russia.

But if Serebrovsky is alive, I am confident that no matter where he is or what he has done, he is troubled today about the state of the Gold Trust, into which he put so much of his life. Even I, who no longer have any connections or special interest in Soviet Russia, feel a sense of concern about that vast organization into which I, too, put a bit of myself.

Serebrovsky is—or was—a hard-bitten Russian revolutionary, with at least thirty years of intense and often bitter struggles behind him. I am just a plain American mining engineer. But he and I have shared the heartening experience of helping to create a vast enterprise where none existed before. For that reason, I am certain that the Gold Trust would occupy Serebrovsky's thoughts in prison or exile, just as it often does mine, back in my own happier country and circumstances.



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